



**US Army Corps  
of Engineers**  
Construction Engineering  
Research Laboratories



# **The Environmental Assessment and Management (TEAM) Guide**

*Connecticut Supplement*  
*Revised October 1997*

Environmental assessments help determine compliance with current environmental regulations. The U.S. Air Force, U.S. Army, Defense Logistics Agency (DLA), and Corps of Engineers (Civil Works) have adopted environmental compliance programs that identify compliance problems before they are cited as violations by the U.S. Environmental Protection Agency.

Since 1984, the U.S. Army Construction Engineering Research Laboratories, in cooperation with numerous Department of Defense (DOD) components, has developed environmental compliance assessment checklist manuals. The Environmental Assessment and Management (TEAM) Guide was developed for use by all DOD components. Currently there are five participating DOD components: the Air Force, Air National Guard, Army, Civil Works, and DLA. These agencies have agreed to share the development and maintenance of this Guide.

The Guide combines Code of Federal Regulations and management practices into a series of checklists that show legal requirements and the specific operations or items to review. TEAM Guide is supplemented by DOD component-specific manuals detailing DOD component regulations and policies. The Connecticut Supplement was developed to be used in conjunction with the TEAM Guide, using existing Connecticut state environmental legislation and regulations as well as suggested management practices.

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## FOREWORD

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## NOTICE

This manual is intended as general guidance for personnel at Department of Defense (DOD) installations/ CW facilities. It is not, nor is it intended to be, a complete treatise on environmental laws and regulations. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained herein. For any specific questions about, or interpretations of, the legal references herein, consult appropriate legal counsel.



## CONNECTICUT SUPPLEMENT

The Connecticut Supplement to the U.S. TEAM Guide contains the protocols necessary for determining compliance with Connecticut environmental regulations. This manual is a supplement to the U.S. TEAM Guide; the manual does not replace it.

The following Connecticut agencies issue regulations and have responsibility in the areas indicated.

- Council on Environmental Quality - the Council's primary responsibilities are:
  - preparation of an annual report on the status of the environment
  - review of state agencies' construction projects
  - investigation of citizens' complaints and allegations of violations of environmental laws.
- Department of Environmental Protection - administers the day-to-day regulatory activities. It has two major divisions, Conservation and Preservation and Environmental Quality. The Environmental Quality Division breaks down into six program areas: air compliance, water compliance, waste management, noise control, water resources, and radiation control.
  - Air Compliance Unit (203/566-4030).
  - Coastal Resources Unit - regulates tidal wetlands.
  - Natural Resources Center - aids persons requiring information on state geology, topography, and overall environmental status. It carries out aerial photography; topography mapping; geology, mineral resources, and soil mapping; continuous monitoring for quantity and quality of surface and groundwater, precipitation, acid rain, and earthquake seismicity; and inventories of biota, threatened and endangered species, and natural area identification.
  - Noise Control Unit.
  - Radiation Control Unit.
  - Waste Management Bureau - handles solid waste facility permit programs, infectious waste once it reaches the environment, and all matters concerning hazardous waste including pesticides and oil and chemical spills.
  - Water Compliance Unit (203/566-2588) - administers the state water pollution-permit program, which includes all categories of dischargers to surface water, groundwater, and municipal sanitary sewers. This unit also administers the NPDES discharge and underground injection well permitting program.
  - Water Resources Unit - administers Connecticut's flood management and inland wetlands and watercourses programs. The Department delegates much of the responsibility for inland wetlands to municipalities.
- Department of Health - shares with the Department of Environmental Protection responsibility for managing infectious waste.
- Office of the Industrial Permit Coordinator -coordinates environmental permitting activities, and can furnish information on the status of any permit application.
- State Emergency Response Commission - a report should be phoned immediately to the Commission (203/566-3338) when a spill of a substance covered by Title III of the Superfund law occurs or a release of oil or hazardous substance into state waters.





## ACRONYMS

ACGIH	American Conference of Governmental Industrial Hygienists
AQMA	air quality management area
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
BACT	best available control technology
BOD	biochemical oxygen demand
BTEX	benzene, toluene, ethylbenzene, xylene
CAR	control area responsible party
CAS	Chemical Abstract Service
CEM	continuous emission monitoring
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CFC	chlorofluorocarbons
CWA	<i>Clean Water Act</i>
dB	decibel
dBA	decibels using A-weighting network
dB(C)	decibels using C-weighting network
DEQ	Department of Environmental Quality
ESA	<i>Endangered Species Act</i>
FIFRA	<i>Federal Insecticide, Fungicide, and Rodenticide Act</i>
GVWR	gross vehicle weight rating
HEPA Filter	high efficiency particulate air filter
HWM	hazardous waste management
IARC	International Agency for Research on Cancer
ICRU	International Commission on Radiological Units and Measurements
IUPAC	International Union of Pure and Applied Chemistry
LAER	lowest achievable emission rate
Ldn	day-night airport noise level
Leq	equivalent noise level
LPG	Liquefied Petroleum Gas
MC	medium curing
MCL	maximum contaminant level
MFL	million fibers per liter
MSDS	material safety data sheet
MSW	municipal-type solid waste
MSWLF	municipal solid waste landfill
MWC	municipal waste combustor
NBS	National Bureau of Standards
NEPA	<i>National Environmental Policy Act</i>
NFPA	National Fire Protection Association
NHPA	<i>National Historic Preservation Act</i>
NPDES	National Pollutant Discharge Elimination System
NTNCWS	nontransient noncommunity water system
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
PEL	permissible exposure limit

## ACRONYMS

POTW	publicly owned treatment works
PUC	Public Utility Commission of Oregon
RACT	reasonably available control technology
RC	rapid curing
RCRA	<i>Resource Conservation and Recovery Act</i>
RDF	refuse-derived fuel
REL	recommended exposure level
RGF	recirculating gravel filter
RVP	Reid vapor pressure
SAE	Society of Automotive Engineers
SARA	<i>Superfund Amendments and Reauthorization Act</i>
SC	slow curing
SDWA	<i>Safe Drinking Water Act</i>
SIC	Standard Industrial Classification
SMCL	secondary maximum contaminant level
SPCC	spill prevention countermeasure and control
SPL	sound pressure level
SWDA	<i>Solid Waste Disposal Act</i>
TLV	threshold limit value
TNTC	too numerous to count
TPH	total petroleum hydrocarbons
TRI	toxic release inventory
TSCA	<i>Toxic Substance Control Act</i>
TSD	treatment, storage, and disposal
TSDF	treatment, storage, and disposal facility
TSP	total suspended particulate
TSS	total suspended solids
TTHM	total trihalomethane
UL	Underwriters Laboratory
UFC	Uniform Fire Code
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
VOL	volatile organic liquid
WPCF	Water Pollution Control Facilities

## COMMONLY USED ABBREVIATIONS

bbl	barrel	mg	milligram
Btu	British thermal unit	mi	mile
C	Celsius	min	minute
cfs	cubic feet per second	MJ	megajoule
cm	centimeter	mL	milliliter
cm <sup>2</sup>	square centimeter	mm	millimeter
dscf	dry standard cubic foot	mo	month
dscm	dry standard cubic meter	mrem	millirem
F	Fahrenheit	MW	megawatt
ft	foot	ng	nanogram
ft <sup>2</sup>	square feet	NTU	nephelometric turbidity unit
ft <sup>3</sup>	cubic feet	oz	ounce
g	gram	pCi	picoCurie
gal	gallon	ppm	part per million
gJ	gigajoule	ppmv	part per million by volume
gr	grain	ppmw	part per million by weight
h	hour	psi	pound per square inch
ha	hectare	psia	pounds per square inch absolute
hp	horsepower	psig	pounds per square inch gauge
in.	inch	qt	quart
J	Joule	s	second
kg	kilogram	scf	standard cubic foot
km	kilometer	scm	standard cubic meter
kPa	kilopascals	sdcf	standard dry cubic foot
L	liter	sdcv	standard dry cubic meter
lb	pound	TU	turbidity unit
m	meter	V	volt
m <sup>3</sup>	cubic meter	yd	yard
MBtu	million British thermal units	yd <sup>2</sup>	square yard
meq	milligram equivalent	yr	year
CO	carbon monoxide	NO <sub>2</sub>	nitrogen dioxide
CO <sub>2</sub>	carbon dioxide	NO <sub>x</sub>	nitrogen oxides
Hg	mercury	SO <sub>2</sub>	sulfur dioxide



## METRIC CONVERSION TABLE

The following conversion table may be used throughout this manual to make approximate conversions between U.S. units and metric units.

1 in.	=	2.54 cm or 25.4 mm
1 ft	=	0.3048 m
1 ft <sup>2</sup>	=	0.093 m <sup>2</sup>
1 ft <sup>3</sup>	=	0.028 m <sup>3</sup>
1 psi	=	6.895 kPa
1 lb	=	0.454 kg
1 mi	=	1.61 km
1 gal	=	3.78 L
°F	=	(°C + 17.78) x 1.8
°C	=	0.55 (°F - 32)
1 yd	=	0.9144 m
1 Btu	=	4.184 kJ
1 acre	=	4046.9 m <sup>2</sup>
1 acre	=	0.405 hectare

## SECTION 1

### AIR EMISSIONS MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for Air Emissions Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Citations

The definitions and requirements for the Air Emissions Management section of the Connecticut Supplement are taken from the Regulations of Connecticut State Agencies (Conn. Agencies Regs.).

#### Definitions

- *Actual Emissions* - the rate of emissions from a source, including fugitive emissions quantified by permit, order or by registration information, after application of air pollution control equipment, of a particular air pollutant where the rate of emissions is calculated using (Conn. Agencies Regs. 22a-174-1):
  1. real or expected production rates, hours of operation, and types of materials processed, stored or combusted for the period specified
  2. information from the compilation of air pollutant emission factors (AP-42) published by the USEPA, relevant source test data or other information deemed more representative by the Commissioner.
- *Affected Portion or Affected Portion of a Premises* - any source or combination of sources at a premises the emissions of which are included potential emissions of volatile organic compounds (Conn. Agencies Regs. 22a-174-32(a)).
- *Air Contaminant Emission Control System* - the equipment designed for installation on a motor vehicle or motor vehicle engine for the purpose of reducing the air contaminants emitted from the motor vehicle or motor vehicle engine, or a system or engine modification on a motor vehicle or motor vehicle engine which causes a reduction of air contaminants emitted from the motor vehicle or motor vehicle engine, including but not limited to exhaust control systems, fuel evaporation control systems, and crankcase ventilating systems (Conn. Agencies Regs. 22a-174-36(a)).
- *Air Pollutant* - dust, fumes, mist, smoke, other particulate matter, vapor, gas, aerosol, odorous substances, or any combination thereof, but does not include CO<sub>2</sub>, uncombined water vapor or water droplets, or molecular oxygen or nitrogen (Conn. Agencies Regs. 22a-174-1).
- *Air Pollution* - the presence in the outdoor atmosphere of one or more air pollutants or any combination thereof in such quantities and of such characteristics and duration as to be, or be likely to be, injurious to public welfare, to the health of human, plant or animal life, or to property, or as unreasonably to interfere with the enjoyment of life and property (Conn. Agencies Regs. 22a-174-1).
- *Air Pollution Control Equipment* - any device which prevents or controls the emission of any air contaminant (Conn. Agencies Regs. 22a-174-17(c)(1)).
- *Allowable Emissions* - the rate of emissions from a stationary source of a particular air pollutant where the emission rate is calculated using the maximum rated capacity of the source, unless the source is subject to permit conditions or other order of the Commissioner which limit the maximum rated capacity by restricting the



operating rate or hours of operation of the source, and the most stringent of the following (Conn. Agencies Regs. 22a-174-1):

1. applicable standards as set forth in 40 CFR 60 and 61, as from time to time may be amended
  2. the applicable emission limitation under these regulations including those with a future compliance date
  3. the emission rate specified as a condition of a permit or order issued by the Commissioner, including any such condition with a future compliance date
  4. the applicable emission limitation under the State Implementation Plan, including any such limitation with a future compliance date.
- *Ambient Air* - that portion of the atmosphere external to buildings, to which the general public has access (Conn. Agencies Regs. 22a-174-1).
  - *Ambient Air Quality Standard (AAQS)* - any standard which establishes the largest allowable concentration of a specific pollutant in the ambient air of a region or subregion as established by the USEPA or by the Commissioner and which is listed in Conn. Agencies Regs. 22a-174-24 (Conn. Agencies Regs. 22a-174-1 and 22a-174-24(a)).
  - *Architectural Coating* - a coating used for residential or commercial buildings and their appurtenances, or industrial buildings, or other outdoor structures (Conn. Agencies Regs. 22a-174-1).
  - *Attainment* - that the quality of the ambient air, as determined by the Commissioner, meets National Ambient Air Quality Standards for a given air pollutant for which such standards have been established by the USEPA (Conn. Agencies Regs. 22a-174-1).
  - *Attainment Area* - a geographic area which has been designated as attainment under 40 CFR 81 in accordance with the provisions of 42 U.S. Code 7407 (i.e., Section 107 of the Clean Air Act) (Conn. Agencies Regs. 22a-174-1).
  - *Asphalt* - a dark-brown cementitious material which is solid, semisolid, or liquid in consistency and in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum (Conn. Agencies Regs. 22a-174-20(k)).
  - *Best Available Control Technology or BACT* - an emission limitation, including a visible emission standard, based on the maximum degree of reduction for each applicable air pollutant emitted from any proposed stationary source or modification which the Commissioner, on a case-by-case basis, determines is achievable for a similar representative type of source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment, clean fuels, or innovative fuel combustion techniques for control of such air pollutant (Conn. Agencies Regs. 22a-174-1).
  - *Begin Actual Construction* - initiation of physical onsite construction activities of an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipe work, and construction of permanent storage structures. With respect to a change in the method of operation this term refers to those onsite activities which mark the initiation of the change (Conn. Agencies Regs. 22a-174-1).
  - *Brush* - shrubs, vegetation, or prunings the diameter of which is not greater than three inches at the widest point (Conn. Agencies Regs. 22a-174-17(a)).
  - *CARB* - the California Air Resources Board (Conn. Agencies Regs. 22a-174-36(a)).
  - *Certified* - the finding by USEPA or CARB that a motor vehicle, motor vehicle engine, or motor vehicle engine family, or air contaminant emission control system has satisfied the criteria adopted by USEPA or CARB for the control of specified air contaminants from motor vehicles (Conn. Agencies Regs. 22a-174-36(a)).

- *Class 8 Bituminous Concrete* - material specified as Class 8 Bituminous Concrete in the most current version of the State of Connecticut, Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction (Conn. Agencies Regs. 22a-174-20(k)).
- *Cold Cleaning* - the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing or immersion while maintaining the degreasing solvent below its boiling point. Wipe cleaning is not included in this definition (Conn. Agencies Regs. 22a-174-20(l)).
- *Combustible* - the heat-producing constituents of a fuel (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Combustion* - the rapid chemical combination of oxygen with the combustible element of a fuel resulting in the production of heat (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Combustion Efficiency* - the percentage number calculated in accordance with the formula  $CE = [CO_2 / (CO + CO_2)] \times 100$ , where: CE = combustion efficiency in percent,  $CO_2$  = amount of  $CO_2$ , CO = amount of CO and  $CO_2$  and CO are both measured in volume units (Conn. Agencies Regs. 22a-174-1).
- *Commence or Commencement* (as applied to construction of a stationary source or modification) - that the owner or operator has all necessary permits or approvals required under Federal air quality control laws and these regulations, and has either:
  1. begun, or caused to begin, a program of physical onsite construction of the source:
    - A. subject to a schedule which will lead to completion in a reasonable time
    - B. without any breaks in such construction of more than 18 mo
  2. entered into site-specific binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the source to be completed within a reasonable time.

For the purposes of this definition, construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification) which would result in a change in either potential or actual emissions (Conn. Agencies Regs. 22a-174-1).

- *Composite Motor Vehicle or COMPO* - a vehicle which is constructed from the component parts of two or more motor vehicles of different model year or vehicle type (Conn. Agencies Regs. 22a-174-27).
- *Commissioner* - the Commissioner of Environmental Protection, or any member of the Department or any local air pollution control official or agency authorized by the Commissioner, acting singly or jointly, to whom the Commissioner assigns any function arising under the provisions of these regulations (Conn. Agencies Regs. 22a-174-1).
- *Continuous Web, Strip, or Wire* - for the purposes of Conn. Agencies Regs. 22a-174-20(f)(14), a product that contains at least one unbroken web, strip, or wire from beginning to end of an article, machine, equipment, or other contrivance (or series of) irrespective of the addition of any other materials during processing (Conn. Agencies Regs. 22a-174-20(f)(14)).
- *Control Techniques Guideline or CTG* - a document published by the Administrator in accordance with Section 108 of the Federal Clean Air Act describing techniques for controlling volatile organic compound emissions (Conn. Agencies Regs. 22a-174-32(a)).
- *Conveyorized Degreasing* - the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized degreasing solvents (Conn. Agencies Regs. 22a-174-20(l)).
- *Criteria Air Pollutant* - any air pollutant for which an ambient air quality standard has been established by the administrator in accordance with Section 107 of the Clean Air Act (Conn. Agencies Regs. 22a-174-1).

- *Cutback Asphalt* - asphalt which has been liquefied by blending with more than seven percent organic compounds by volume as determined by American Society for Testing and Materials' Distillation Test D-244 (Conn. Agencies Regs. 22a-174-20(k)).
- *Degreasing Solvent* - any volatile organic compound used for metal cleaning (Conn. Agencies Regs. 22a-174-20(l)).
- *Department* - the Department of Environmental Protection (Conn. Agencies Regs. 22a-174-1).
- *Deterioration in Air Quality* - that a pollutant concentration in a region or subregion for any pollutant specified in these regulations will exceed the maximum pollutant concentration for the specified time period for that region or subregion (Conn. Agencies Regs. 22a-174-1).
- *Dioxin Emissions* - tetrachlorodibenzodioxin (TCDD) and tetrachlorodibenzofuran (TCDF) emissions or emissions of any other isomers of comparable toxicity (Conn. Agencies Regs. 22a-174-1).
- *Dual-Fuel* - a motor vehicle that is engineered and designed to be capable of operating on a petroleum fuel and on another fuel which is stored separately on-board the vehicle (Conn. Agencies Regs. 22a-174-36(a)).
- *Dry Cleaning Facility* - a facility engaged in the cleaning of fabrics in an essentially nonaqueous solvent by means of one or more washes in solvent, extraction of solvent by spinning, and drying by tumbling in an airstream. The facility includes but is not limited to any washer, dryer, filter, and purification systems, waste disposal systems, holding tanks, pumps, and attendant piping and valves. Dry cleaning facility includes those which are coin-operated and intended for general public use (Conn. Agencies Regs. 22a-174-20(w)).
- *Effective Date* - the effective date of these regulations [i.e., Conn. Agencies Regs. 22a-174] is 1 June 1972 (Conn. Agencies Regs. 22a-174-25(a)).
- *Emission Control Label* - the permanent stickers required by CARB and affixed to all 1998 and subsequent model year passenger cars and light duty trucks, certified for sale in California (Conn. Agencies Regs. 22a-174-36(a)).
- *Emergency* - an unforeseeable condition that is beyond the control of the owner or operator of the premise at which the emergency generator is located and of the owner or operator of an emergency engine and that (Conn. Agencies Regs. 22a-174-22(a)):
  1. results in an interruption of electrical power from the utility to the premise
  2. results in a deviation of voltage from the utility to the premise of three percent above or five percent below standard voltage in accordance with Conn. Agencies Regs. 16-11-115
  3. requires an interruption of electrical power from the utility to the premise enabling the owner or operator to perform emergency repairs
  4. requires operation of the emergency engine to minimize damage from fire, flood, or any other catastrophic event, natural, or man-made[Added October 1997].
- *Emergency Engine* - a stationary reciprocating engine or a turbine engine which is used as a means of providing mechanical or electrical power only during periods of testing and scheduled maintenance or during either an emergency or in accordance with a contract intended to ensure an adequate supply of electricity for use within the state of Connecticut during the loss of electrical power derived from nuclear facilities. The term does not include an engine for which the owner or operator of such engine is party to any other agreement to sell electrical power from such engine to a utility, or otherwise receives any reduction in the cost of electrical power for agreeing to produce power during periods of reduced voltage or reduced power availability (Conn. Agencies Regs. 22a-174-22(a))[Added October 1997].
- *Emergency Generator* - [Deleted October 1997, see *Emergency Engine*].

- *Emergency Situation* - [Deleted October 1997, see *Emergency*].
- *Emergency Vehicle* - any publicly owned vehicle operated by a peace officer in performance of his or her duties, any authorized vehicle used for fighting fires or responding to emergency fire calls, any publicly owned authorized vehicle used by emergency medical technicians or paramedics, or used for towing or servicing other vehicles, or repairing damaged lighting or electrical equipment, or an ambulance (Conn. Agencies Regs. 22a-174-36(a)).
- *Emission* - the act of releasing or discharging air pollutants into the ambient air from any source (Conn. Agencies Regs. 22a-174-1).
- *Emission Limitation and Emission Standard* - a requirement established by the Commissioner or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement which limits the level of opacity, prescribes equipment or fuel specifications, or relates to the operation or maintenance of a source to assure continuous emission reduction (Conn. Agencies Regs. 22a-174-1).
- *Enhanced Vehicle Inspection and Maintenance Program* - a comprehensive vehicle emissions inspection and maintenance (I/M) program required pursuant to 42 U.S. Code Section 7511a(c)(3) (Conn. Agencies Regs. 22a-174-27).
- *Flare* - an apparatus or contrivance for the burning of flammable gases or vapors at or near the exit of a stack, flue or vent (Conn. Agencies Regs. 22a-174-1).
- *Fleet Average Emissions* - a motor vehicle manufacturer's average vehicle emissions of all nonmethane organic gases from all vehicles which are subject to this section, sold in the State of Connecticut in any model year (Conn. Agencies Regs. 22a-174-36(a)).
- *Flexographic Printing* - the application of words, designs or pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials (Conn. Agencies Regs. 22a-174-20(v)).
- *Fireman (Firemen)* - any person whose full-time occupation is fighting fires or who engages in fire fighting under the immediate supervision of a person whose full-time occupation is fighting fires (Conn. Agencies Regs. 22a-174-17(a)).
- *Freeboard Height* - for a cold cleaner, the distance from the liquid solvent in the degreaser tank to the lip of the tank. For an open top vapor degreaser, it is the distance from the solvent vapor level in the tank during idling to the lip of the tank. For a vapor conveyORIZED degreaser, it is the distance from the vapor level to the bottom of the entrance or exit opening whichever is lower. For a cold conveyORIZED degreaser, it is the distance from the liquid solvent level to the bottom of the entrance or exit opening whichever is lower (Conn. Agencies Regs. 22a-174-20(l)).
- *Freeboard Ratio* - the freeboard height divided by the smaller interior dimension (length, width or diameter) of the degreaser (Conn. Agencies Regs. 22a-174-20(l)).
- *Fuel* - a substance containing combustibles used for producing heat, light, power or energy (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Fuel-Burning Equipment* - any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power (Conn. Agencies Regs. 22a-174-1).
- *Fuel-Flexible* - a methanol-fueled motor vehicle that is engineered and designed to be operated using any gasoline-methanol fuel mixture or blend (Conn. Agencies Regs. 22a-174-36(a)).

- *Fuel User* - any person who stores or utilizes commercial or noncommercial fuel for the purpose of creating by combustion heat, light, power, or energy (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Fugitive Dust* - solid airborne particulate matter emitted from any source other than through a stack (Conn. Agencies Regs. 22a-174-1).
- *Fugitive Emissions* - fugitive dust or those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening (Conn. Agencies Regs. 22a-174-1).
- *Gas or Gaseous Fuel* - natural gas, propane, or any other fuel that is in the gaseous state under standard conditions (Conn. Agencies Regs. 22a-174-22(a)).
- *g/bk hp-h* - grams per brake horsepower-hour (Conn. Agencies Regs. 22a-174-22(a)).
- *Gross Heat Input* - the total energy requirement for a premise for 12 mo (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Gross Vehicle Weight Rating or GVWR* - the value specified by the manufacturer as the maximum loaded weight of a single or a combination (articulated) vehicle, or its registered gross weight, whichever is greater. The GVWR of a combination (articulated) vehicle commonly referred to as the Gross Combination Weight Rating or GCWR is the GVWR of the power unit plus the GVWR of the towed unit or units (Conn. Agencies Regs. 22a-174-27) (Conn. Agencies Regs. 22a-174-27).
- *Hazard Limiting Value or HLV* - the highest acceptable concentration in the ambient air of a hazardous air pollutant, as shown in Tables 1, 2, and 3 of Appendix 1-1 as determined by the Commissioner. The primary use of this term is in the derivation of the maximum allowable stack concentration for a source (Conn. Agencies Regs. 22a-174-1).
- *Hazardous Air Pollutant* - a substance listed in either Table 1, 2, or 3 of Appendix 1-1 (Conn. Agencies Regs. 22a-174-1).
- *Heat Input* -
  1. the total gross calorific value of all fuels burned, measured in British thermal units by ASTM method D2015-66, D240-64, or D1826-64, using the higher heating value of each fuel (Conn. Agencies Regs. 22a-174-1)
  2. the actual firing rate of the fuel burning equipment (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Hybrid Electric Vehicle or HEV* - a motor vehicle which allows power to be delivered to the driver wheels solely by a battery powered electric motor but which also incorporates the use of a combustion engine to provide power to the battery, or any vehicle which allows power to be delivered to the driver wheels by either a combustion engine and/or by a battery powered electric motor (Conn. Agencies Regs. 22a-174-36(a)).
- *Idle Test Procedure with Loaded Preconditioning* - an analysis of exhaust gas concentration, by percent CO and HC, in accordance with recommended I/M short test procedures for the 1990's: Six Alternatives section 4, USEPA-AA-TSS-I/M-90-3 (January 1991) (Conn. Agencies Regs. 22a-174-27).
- *Incinerator* - any device, apparatus, equipment, or structure used for destroying, reducing, or salvaging by fire any material or substance including, but not limited to, refuse, rubbish, garbage, trade waste, debris or scrap; or facilities for cremating human or animal remains (Conn. Agencies Regs. 22a-174-1 and 22a-174-18(c)(1))
- *Indirect Source* - any building, structure, facility installation or combination thereof, that has or leads to associated activity as a result of which an air pollutant is or may be emitted. Indirect sources include, but are not limited to: shopping centers, sports complexes; drive-in theaters or restaurants; parking lots or garages;

residential, commercial, industrial or institutional buildings or developments; amusement parks and other recreational areas; highways; airports and combinations thereof (Conn. Agencies Regs. 22a-174-1).

- *Indirect Source Construction Permit* - a permit for the construction of an indirect source which is required to ensure that the proposed indirect source will neither prevent nor interfere, either directly or indirectly, with the attainment or maintenance of any applicable ambient air quality standard (Conn. Agencies Regs. 22a-174-1).
- *Light-Duty Truck or LDT* -
  1. any motor vehicle having a gross vehicle weight rating of 6000 lb or less, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use (Conn. Agencies Regs. 22a-174-36(a))
  2. a motor vehicle rated at 10,000 lb GVWR or less and is designed (Conn. Agencies Regs. 22a-174-27):
    - A. to transport property or more than 10 persons
    - B. with features enabling off-street or off-highway operation and use.
- *Light-Duty Vehicle or LDV* - a motor vehicle that is designed (Conn. Agencies Regs. 22a-174-27):
  1. to carry not more than 10 persons, including the operator
  2. to transport persons and their property with at least 50 percent of the total area enclosed by the outermost body contour lines, excluding the area enclosing the engine.
- *Loaded Vehicle Weight or LVW* - vehicle curb weight plus 300 lb (Conn. Agencies Regs. 22a-174-27 and (Conn. Agencies Regs. 22a-174-36(a)).
- *Lowest Achievable Emission Rate or LAER* - the rate of emissions which reflects the more stringent of (Conn. Agencies Regs. 22a-174-1):
  1. the most stringent emission limitation which is contained in any state implementation plan for such class or category of stationary source, unless the owner or operator demonstrates to the Commissioner's satisfaction that such limitations are not achievable
  2. the most stringent emission limitation which is achieved in practice by such stationary source or category of stationary source (Conn. Agencies Regs. 22a-174-1).
- *Major Stationary Source of NO<sub>x</sub>* - a premise with potential emissions of NO<sub>x</sub> equal to or greater than 50 tons/yr in a serious nonattainment area for ozone, or 25 tons/yr in a severe nonattainment area for ozone (Conn. Agencies Regs. 22a-174-22(a)).
- *Maximum Allowable Stack Concentration or MASC* - the maximum allowable concentration of a hazardous air pollutant in the exhaust gas stream of a source under actual operating conditions at the discharge point (Conn. Agencies Regs. 22a-174-1).
- *Maximum Pollutant Concentration* - the largest concentration of a specific pollutant in a region or subregion either as a measured or calculated value, as determined by the Commissioner, for the 12 mo ending on 30 June 1972. The time periods to be averaged for the purpose of establishing maximum pollutant concentrations shall be as follows: for SO<sub>x</sub>, particulate matter, and NO<sub>x</sub>, 1 yr; for CO, 8 h; for photochemical oxidants, 1 h; for hydrocarbons, 3 h (Conn. Agencies Regs. 22a-174-1).
- *Maximum Rated Capacity* - the design maximum hourly capacity or highest demonstrated hourly capacity, whichever is greater, multiplied by 365 days/yr and 24 h/day (Conn. Agencies Regs. 22a-174-1).
- *Maximum Uncontrolled Emissions* - the rate of emissions for a source, determined before the application of air pollution control equipment unless the source is incapable of being operated without the air pollution control equipment, of a particular air pollutant where the rate of emissions is calculated using (Conn. Agencies Regs. 22a-174-1):
  1. the maximum rated capacity of the source unless the Commissioner determines that the source is physically unable to operate at that capacity or unless the maximum rated capacity is limited by



restrictions on production rates, hours of operation, and types of materials processed, stored or combusted either through permit conditions or other order of the Commissioner

2. information from the Compilation of Air Pollutant Emission Factors (AP-42) published by the USEPA, relevant source test data or other information deemed more representative by the Commissioner (Conn. Agencies Regs. 22a-174-1).
- *Medium-Curing Cutback Asphalt* - the material that meets the specifications of the American Society for Testing and Materials Designation D 2028 (Conn. Agencies Regs. 22a-174-20(k)).
  - *Metal Cleaning* - the process of cleaning soils from metal surfaces by cold cleaning or open top vapor degreasing or conveyORIZED degreasing (Conn. Agencies Regs. 22a-174-20(l)).
  - *Mobile Source* - a source designed or constructed to move from one location to another during normal operation except portable equipment and includes, but is not limited to, automobiles, buses, trucks, tractors, earth moving equipment, hoists, cranes, aircraft, locomotives operating on rails, vessels for transportation on water, lawn mowers, and other small home appliances (Conn. Agencies Regs. 22a-174-1).
  - *Model Year* - a motor vehicle manufacturer's annual production period, which includes 1 January of a calendar year or, if the manufacturer has no annual production period, the calendar year. In case of any vehicle manufactured in two or more stages, the time of manufacture shall be the date of completion of the chassis (Conn. Agencies Regs. 22a-174-36(a)).
  - *Modify or Modification* - the following (Conn. Agencies Regs. 22a-174-1):
    1. making any physical change in, change in the method of operation of, or addition to a stationary source that:
      - A. increases the potential emissions of any individual air pollutant from a stationary source by 5 tons/yr or more
      - B. increases the maximum rated capacity of the stationary source unless the owner or operator of the stationary source demonstrates to the Commissioner's satisfaction that such increase is less than 15 percent and the change or addition does not cause an increase in the actual emissions or the potential emissions
      - C. increases the potential emissions above the levels listed in Table 3(k)-1 of Conn. Agencies Regs. 22a-174-3(k)
      - D. increases maximum uncontrolled emissions from a stationary source by 100 tons/yr or more.  
(NOTE: In addition a change in the type fuel used in accordance with a permit or order, or the type of fuel for which the source has provided registration under Conn. Agencies Regs. 22a-174-2 to the Commissioner shall be considered a modification unless such change is allowed under a permit or other order of the Commissioner either of which is Federally enforceable.)
    2. notwithstanding the above, the following are not modifications unless the stationary source was previously limited by permit conditions or other order of the Commissioner:
      - A. any routine maintenance, repair or replacement unless such replacement results in reconstruction as defined in this section
      - B. a change in the method of operation
      - C. any increase in the production rate, if such increase does not exceed the operating design capacity of the affected facility
      - D. any increase in hours of operation
      - E. any change, the sole purpose of which is to bring an existing source into compliance with regulations applicable to such source, unless such change is a major modification or a major stationary source
      - F. relocation of a portable rock crusher with potential emissions of less than 15 tons/yr which has a permit or exemption letter issued by the Commissioner under Conn. Agencies Regs. 22a-174-3 provided the owner or operator provides written notice to the Commissioner prior to the relocation
      - G. relocation of a portable stripping facility which has a general permit issued by the Commissioner pursuant to Conn. Agencies Regs. 22a-174(1) of the Connecticut General Statutes, provided the

owner or operator of such facility provides written notice to the Commissioner prior to the relocation.

- *MRC* - maximum rated capacity (Conn. Agencies Regs. 22a-174-22(a)).
- *Multiple-Chamber Incinerator* - any article, machine, equipment, contrivance, structure or part of a structure used to dispose of combustible refuse by burning, which consists of two or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned (Conn. Agencies Regs. 22a-174-1).
- *Netting* - the determination of the increase or decrease, of potential emissions only, from stationary sources on any individual premise which the Commissioner determines will occur before the date that the increase from the proposed modification occurs (Conn. Agencies Regs. 22a-174-1).
- *New Vehicle* - any passenger car or light duty truck with 7500 miles or fewer on its odometer (Conn. Agencies Regs. 22a-174-36(a)).
- *Nitrogen Oxides or NOx* - the sum of all NOx, expressed as NO2 (Conn. Agencies Regs. 22a-174-1).
- *Nonattainment* - that the quality of the ambient air, as determined by the Commissioner, fails to meet any National Ambient Air Quality Standard for a given pollutant for which such standards have been established by the USEPA (Conn. Agencies Regs. 22a-174-1).
- *Nonattainment Air Pollutant* - the particular air pollutant for which an area is designated nonattainment, except that volatile organic compounds and NOx are nonattainment air pollutants, for ozone nonattainment areas (Conn. Agencies Regs. 22a-174-1).
- *Nonattainment Area* - a geographic area which has been designated as nonattainment under 40 CFR 81 in accordance with the provisions of 42 U.S. Code 7407 (Section 107 of the Clean Air Act) (Conn. Agencies Regs. 22a-174-1).
- *Offset Fill Pipe* - a fill pipe that has bends or angles such that a straight sleeve cannot be installed (Conn. Agencies Regs. 22a-174-1).
- *Opacity* - the degree to which emissions reduce the transmission of light and obscure the view of an object in the background (Conn. Agencies Regs. 22a-174-1).
- *Open Burning* - the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through an adequate stack or flue (Conn. Agencies Regs. 22a-174-1).
- *Open Burning Official* - any person designated and certified by the Commissioner (Conn. Agencies Regs. 22a-174-17(a)).
- *Open Top Vapor Degreasing* - the batch process of cleaning and removing soils from metal surfaces by condensing hot degreasing solvent vapor on the colder metal parts (Conn. Agencies Regs. 22a-174-20(l)).
- *Operator* - the person or persons who are legally responsible for the operation of a source of air pollution (Conn. Agencies Regs. 22a-174-1).
- *Organic Compounds* - any chemical compounds of carbon excluding CO, CO2, carbonic acid, metallic carbides, metallic carbonates and ammonium carbonate (Conn. Agencies Regs. 22a-174-1).

- *Organic Materials* - for the purposes of Conn. Agencies Regs. 22a-174-20(f), chemical compounds of carbon excluding CO, CO<sub>2</sub>, carbonic acid, metallic carbides, metallic carbonates, an ammonium carbonate (Conn. Agencies Regs. 22a-174-20(f)(10)).
- *Organic Solvents* - for the purposes of Conn. Agencies Regs. 22a-174-20(f), including diluents and thinners, organic materials that are liquids at standard conditions and are used as solvers, viscosity reducers, or cleaning agents, except that such materials exhibiting a boiling point higher than 220 °F under standard conditions or having an equivalent vapor pressure are not considered to be solvent unless exposed to temperatures exceeding 220 °F (Conn. Agencies Regs. 22a-174-20(f)(11)).
- *Other Boiler* - a boiler that is not a cyclone furnace, fast-response double-furnace naval boiler, or fluidized-bed combustor (Conn. Agencies Regs. 22a-174-22(a)).
- *Other Oil* - a fuel that is liquid at standard conditions and is not residual oil (Conn. Agencies Regs. 22a-174-22(a)).
- *Packaging Rotogravure Printing* - rotogravure printing upon paper, paperboard, metal foil, plastic film, or other substrates, which are, in subsequent operations, formed into packaging products and labels for articles to be sold (Conn. Agencies Regs. 22a-174-20(v)).
- *Particulate Matter* - any material, except water in uncombined form, that is or has been airborne and exists as a liquid or a solid at standard conditions (Conn. Agencies Regs. 22a-174-1).
- *Passenger Car or PC* - any motor vehicle designed primarily for transportation of persons and having a design capacity of 12 persons or less (Conn. Agencies Regs. 22a-174-36(a)).
- *Penetrating Prime Coat* - an application of low-viscosity liquid asphalt to an absorbent surface which is used to prepare an untreated base prior to the application of an asphalt surface (Conn. Agencies Regs. 22a-174-20(k)).
- *Permit To Construct* - a permit for the construction of a stationary source which is required to ensure (Conn. Agencies Regs. 22a-174-1):
  1. that the proposed stationary source will not be in violation of any applicable emissions rate standards imposed by these regulations
  2. that the proposed stationary source will neither prevent nor interfere with the attainment or maintenance of any applicable ambient air quality standards as described in subparagraph 22a-174-3(c)(1)(B).
- *Permit To Operate* - a permit which is required to ensure (Conn. Agencies Regs. 22a-174-1):
  1. that the operations of a stationary source will be in compliance with any applicable emissions rate standards or other applicable requirements imposed by these regulations
  2. that the operations of a stationary source will neither prevent nor interfere with the attainment or maintenance of any applicable ambient air quality standards as described in subparagraph 22a-174-3(c)(1)(B)
  3. that all the terms of the permit to construct were fulfilled.
- *Person* - any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this state, any other state, the United States, or political subdivision or agency thereof or any legal successor, representative, agent, or any agency of the foregoing (Conn. Agencies Regs. 22a-174-1).
- *PM<sub>10</sub>* - particulate matter within an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on Appendix J of 40 CFR 50 and designated in accordance with 40 CFR 53 as published in the 1 July 1987 Federal Register or by an equivalent method approved by the Administrator in accordance with 40 CFR 53 (Conn. Agencies Regs. 22a-174-1).

- *Potential Emissions or Potential To Emit* - the rate of emissions from a stationary source, including fugitive emissions to the extent quantified by permit, order or by registration information, after application of air pollution control equipment, of a particular air pollutant such that the rate is equal to or greater than the actual emissions and where the rate of emissions is calculated using (Conn. Agencies Regs. 22a-174-1):
  1. the maximum rated capacity of the stationary source, unless the maximum rated capacity is limited by restrictions on production rates, hours of operation, and types of materials processed, stored or combusted either through permit conditions or other order of the Commissioner
  2. information from the Compilation of Air Pollutant Emission Factors (AP-42) published by the USEPA, relevant source test data or other information deemed more representative by the Commissioner.
- *ppmvd* - parts per million by volume on a dry basis (Conn. Agencies Regs. 22a-174-22(a)).
- *Premise* - the grouping of all stationary sources at any one location and owned or under the control of the same person or persons (Conn. Agencies Regs. 22a-174-1 and 22a-174-19(a)(1)).
- *Process Source* - any operation, process, or activity except (Conn. Agencies Regs. 22a-174-1):
  1. the burning of fuel for indirect heating in which the products of combustion do not come in contact with process material
  2. the burning of refuse
  3. the processing of salvageable material by burning.
- *Publication Rotogravure Printing* - rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, or other types of printed materials (Conn. Agencies Regs. 22a-174-20(v)).
- *Reasonably Available Control Technology or RACT* - the lowest emission limitation that a particular facility is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology that has been applied to similar but not necessarily identical source categories (Conn. Agencies Regs. 22a-174-1).
- *Reciprocating Engine* - a stationary internal combustion engine having a crankshaft turned by linearly reciprocating pistons (Conn. Agencies Regs. 22a-174-22(a)).
- *Reconstruct or Reconstruction* - the renovation or rebuilding of a source in accordance with the provisions of 40 CFR 60.15. A reconstructed source shall be considered a new source for the purposes of these regulations. Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974, or superseding legislation, or by reason of a Natural Gas Curtailment Plan pursuant to the Federal Power Act, or by reason of an order or rule under Section 125 of the Clean Air Act, shall not be considered reconstruction (Conn. Agencies Regs. 22a-174-1).
- *Refrigerated Chiller* - a device which is mounted above the water jacket and the primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, shall be no greater than 30 percent of the solvent's boiling point in degrees Fahrenheit (Conn. Agencies Regs. 22a-174-20(l)).
- *Region* - a Connecticut intrastate Air Quality Control Region, or the Connecticut portion of an interstate Air Quality Control Region as defined by the USEPA in 40 CFR 81 (Conn. Agencies Regs. 22a-174-1).
- *Remote Fill Pipe* - an offset fill pipe (Conn. Agencies Regs. 22a-174-1).
- *Resident* - an individual seeking to burn on the property where he resides (Conn. Agencies Regs. 22a-174-17(a)).

- *Residual Oil* - any fuel oil of numbers 4, 5, or 6 grades, as defined by Commercial Standard C.S. 12-48 (Conn. Agencies Regs. 22a-174-1).
- *Resources Recovery Facility* - a facility utilizing processes aimed at reclaiming the material or energy values from municipal solid waste (Conn. Agencies Regs. 22a-174-1).
- *Ringelmann Chart* - the chart published and described in the U.S. Bureau of Mines Information Circular 8333 (Conn. Agencies Regs. 22a-174-1).
- *Roll Printing* - the application of words, designs or pictures to a substrate usually by - of a series of hard rubber or steel rolls each with only partial coverage (Conn. Agencies Regs. 22a-174-20(v)).
- *Rotogravure Printing* - the application of words, designs, or pictures to a substrate by - of a roll printing technique which involves intaglio or recessed image areas in the form of cells or indentations (Conn. Agencies Regs. 22a-174-20(v)).
- *Selective Noncatalytic Reduction* - emission control technology which involves the injection of a chemical reagent at high flue gas temperatures to selectively reduce NOx emissions to nitrogen and water (Conn. Agencies Regs. 22a-174-22(a)).
- *Serious Nonattainment Area for Ozone* - all towns within the State of Connecticut, except those towns located in the severe nonattainment area for ozone (Conn. Agencies Regs. 22a-174-1).
- *Severe Nonattainment Area for Ozone* - the towns of Bethel, Bridgeport, Bridgewater, Brookfield, Danbury, Darien, Easton, Fairfield, Greenwich, Monroe, New Canaan, New Fairfield, New Milford, Newtown, Norwalk, Redding, Ridgefield, Sherman, Stamford, Stratford, Trumbull, Weston, Westport, and Wilton (Conn. Agencies Regs. 22a-174-1).
- *Smoke* - small gas-borne particles, excluding water vapor, arising from a process of combustion in sufficient number to be observable (Conn. Agencies Regs. 22a-174-17(c)(1)).
- *Soiling Index* - a measure of the soiling properties of suspended particles in air determined by drawing a measured volume of air through a known area of Whatman No. 4 filter paper for a measured period of time, expressed as COHs/1000 linear feet, or equivalent (Conn. Agencies Regs. 22a-174-1).
- *Solid Waste* - unwanted or discarded materials, including solid, liquid, semisolid, or contained gaseous material (Conn. Agencies Regs. 22a-174-1).
- *Source* - any property, real or personal, which emits or may emit any air pollutant (Conn. Agencies Regs. 22a-174-1).
- *Stack* - any point of release from a source, which emits solids, liquids, or gases into the ambient air, including a pipe, duct, or flare (Conn. Agencies Regs. 22a-174-1).
- *Stack or Chimney* - a flue, conduit or opening permitting particulate or gaseous emission into the open air, or constructed or arranged for such purpose (Conn. Agencies Regs. 22a-174-19(a)(1)).
- *Standard Conditions* - a dry gas temperature of 68 °F and a gas pressure of 14.7 psia (20 °C, 760 mm Hg.) (Conn. Agencies Regs. 22a-174-1).

- *System To Capture and Control* - a system to capture, convey and control VOC emissions released by VOC-emitting equipment, including any device that destroys, recovers, or otherwise removes VOC emissions and permanently reduces VOC emissions into the atmosphere (Conn. Agencies Regs. 22a-174-32(a)).
- *Subregion* - a subdivision of a Region, as determined by the Commissioner (Conn. Agencies Regs. 22a-174-1).
- *THC* - total hydrocarbons (Conn. Agencies Regs. 22a-174-27).
- *Title V Source* - the following (Conn. Agencies Regs. 22a-174-33(a)(15)):
  1. any stationary source subject to 40 CFR 60 [i.e., Standards of Performance for New Stationary Sources] or 40 CFR 61 [i.e., National Emission Standards for Hazardous Air Pollutants]
  2. any stationary source subject to 40 CFR 68 [i.e., Chemical Accident Prevention Provisions]
  3. any stationary source subject to 40 CFR 72 through 78, inclusive i.e., the following:
    - A. Permits Regulation
    - B. SO<sub>2</sub> Allowance System
    - C. Continuous Emission Monitoring
    - D. Acid Rain NO<sub>x</sub> Emission Reduction Program
    - E. Excess Emissions
    - F. Appeal Procedures for Acid Rain Program
  4. any stationary source subject to Section 129(e) of the Federal Clean Air Act
  5. any one or more stationary sources, which are located on one or more contiguous or adjacent properties under common control of the same person or persons and which emit, or have to the potential to emit, including fugitive emissions to the extent quantifiable, in the aggregate, 10 tons or more per year of any hazardous air pollutant, 25 tons or more per year of any combination of hazardous air pollutants, or the quantity established by the Administrator of the USEPA pursuant to 40 CFR 63
  6. any one or more stationary sources, which are located on one or more contiguous or adjacent properties under common control of the same person or persons and which belong to the same two-digit Standard Industrial Classification code, as published by the United States Office of Management and Budget in the Standard Industrial Classification Manual of 1987, and which emit, or have the potential to emit, including fugitive emissions from those categories of sources listed in (2)(i) through (xxvii) in the definition of "major source" in 40 CFR Part 70.2:
    - A. 100 tons or more per year of any regulated air pollutant
    - B. 50 tons or more per year of VOCs or NO<sub>x</sub> in a serious ozone nonattainment area
    - C. 25 tons or more per year of VOCs NO<sub>x</sub> in a severe ozone nonattainment area.
- *Total Suspended Particulate* - particulate matter as measured by the method described in Appendix B of 40 CFR 50 (Conn. Agencies Regs. 22a-174-1).
- *Transient Emissions Test* - any testing method approved by the administrator that measures the emissions of any combination of THC, CO and NO<sub>x</sub>, in grams per mile, during acceleration and deceleration of a vehicle undergoing an enhanced vehicle inspection (Conn. Agencies Regs. 22a-174-27).
- *Turbine Engine* - a stationary internal combustion engine which continuously converts an air-fuel mixture into rotational mechanical energy through the use of moving vanes attached to a rotor (Conn. Agencies Regs. 22a-174-22(a)).
- *Unclassifiable Area* - a geographic area which has not been designated either as attainment or nonattainment under 40 CFR 81 in accordance with the provisions of Section 107 of the Clean Air Act (Conn. Agencies Regs. 22a-174-1).
- *Uncontrolled VOC Emissions* - VOC emissions from the affected portion of a premises prior to the application of a system to capture and control (Conn. Agencies Regs. 22a-174-32(a)).
- *Vehicle* - a motor vehicle (Conn. Agencies Regs. 22a-174-36(a)).



- *Volatile Organic Compound or VOC* - any compound of carbon which participates in atmospheric photochemical reactions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and the organic compounds listed Appendix 1-2 which the USEPA Administrator has designated as having negligible photochemical reactivity (Conn. Agencies Regs. 22a-174-1(97)).
- *VOC-Emitting Equipment* - any equipment, building, or activity that results in the emission of volatile organic compounds through a stack or as fugitive emissions (Conn. Agencies Regs. 22a-174-32(a)).
- *Waste Combustor* - an incinerator as defined in Conn. Agencies Regs. 22a-174-18(c), a resources recovery facility as defined in section 22a-207 of the Connecticut General Statutes, or a sewage sludge incinerator. The term does not include a flare or an industrial fume incinerator (Conn. Agencies Regs. 22a-174-22(a)).
- *Wastewater Separator* - any tank, box, sump, or other container in which any volatile organic compound floating on or entrained or contained in water entering such tank, box, sump, or another container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water (Conn. Agencies Regs. 22a-174-1).
- *Watercourse* - rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, which are contained within, flow through or border upon this state or any portion thereof (Conn. Agencies Regs. 22a-174-1).
- *Zero-Emission Vehicle or ZEV* - any vehicle which is certified by the Executive Officer to produce zero emissions of any criteria pollutants under any and all possible operational modes and conditions. Incorporation of a fuel fired heater shall not preclude a vehicle from being certified as a ZEV provided the fuel fired heater cannot be operated at ambient temperatures above 40 F and the heater is demonstrated to have zero evaporative emissions under any and all possible operational modes and conditions (Conn. Agencies Regs. 22a-174-36(a)).

**AIR EMISSIONS MANAGEMENT  
GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

	<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>
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<p><b>STATE-SPECIFIC AIR REQUIREMENTS</b></p> <p><b>AE.5. General</b></p> <p><b>AE.5.1.CT.</b> Installations/CW facilities must meet general requirements concerning air pollution (Conn. Agencies Regs. 22a-174-9).</p> <p><b>AE.5.2.CT.</b> Installations/CW facilities must not conceal emissions or circumvent Connecticut requirements for the abatement of air pollution (Conn. Agencies Regs. 22a-174-11).</p> <p><b>Ambient Air Quality</b></p> <p><b>AE.5.3.CT.</b> Installations/CW facilities must not cause or contribute to violations of Connecticut ambient air quality standards (Conn. Agencies Regs. 22a-174-24(b) through (m)).</p> <p><b>Control Equipment and Plants</b></p>	<p>Verify that no person allows or causes air pollution (see definition section), including air pollutants not covered by Connecticut regulations for the abatement of air pollution.</p> <p>Verify that stationary sources are operated according to the Federal requirements of 40 CFR 60 and 61 (see U.S. TEAM Guide).</p> <p>Verify that installations/CW facilities do not install or utilize devices or means which, without resulting in the reduction in the total amount of air pollutants emitted, conceals or dilutes emissions of air pollutants which would otherwise violate Connecticut requirements.</p> <p>(NOTE: The abatement of objectionable odors by means of dilution or masking is not deemed a violation of state requirements as long as masking odors do not themselves violate requirements to control odors.)</p> <p>Verify that installations/CW facilities do not cause or contribute to violations of the Connecticut ambient air quality standards set forth in Appendix 1-3.</p>

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<b>AE.5.4.CT.</b> Required equipment and methods used to control air pollution must be utilized at all times when sources are operating or emitting air pollutants (Conn. Agencies Regs. 22a-174-7(a) and (b)).	<p>Verify that required equipment and methods used to control air pollution are utilized at all times sources are operating or emitting air pollutants, except during necessary maintenance.</p> <p>(NOTE: This requirement includes instruments required by permit, order or regulation which measures source operating parameters affecting air pollutant emissions, air pollution control equipment, or other instruments to measure meteorological data required by permit, order, or regulation.)</p>
<b>AE.5.5.CT.</b> When breakdowns, failures, or deliberate shutdowns of control equipment occur, specific actions must be taken (Conn. Agencies Regs. 22a-174-7(c)).	<p>Verify that, when breakdowns, failures, or deliberate shutdowns occur, all reasonable [not defined] measures are taken to return devices/methods to service as soon as possible.</p> <p>Verify that due [not defined] diligence is exercised to minimize emissions while the control equipment or methods are inoperative.</p> <p>Verify that, if control equipment shutdowns are expected to last longer than 72 h and sources are operated during that time period, the Commissioner is notified of the shutdown promptly within 24 h.</p> <p>(NOTE: Notification includes the following information:</p> <ul style="list-style-type: none"> <li>- identification of the specific equipment or instrument taken out, or to be taken out, of service as well as its location and registration or permit number</li> <li>- expected length of time that the air pollution control equipment or instrument is to be out of service</li> <li>- nature and quantity of emissions of air pollutants likely to be emitted during the shutdown period</li> <li>- measures taken to minimize the length of the shutdown period (e.g., use of off-shift labor and equipment)</li> <li>- reasons why it would be impossible or impractical to shut down the stationary source operation during the maintenance period.)</li> </ul>
<b>AE.5.6.CT.</b> When combustion efficiencies are less than required levels, specific actions must be taken (Conn. Agencies Regs. 22a-	<p>Verify that, when combustion efficiencies are less than required levels for more than a total of 72 h in any period of 30 consecutive days, engineering evaluations are submitted to the Commissioner within 30 days of the occurrence of the final hour of combustion efficiency failures.</p> <p>Verify that, for resources recovery facilities, when combustion efficiencies are less than required levels for more than a total of 72 h in any period of 30 consecutive days, stack tests for dioxin are performed within 45 days of the final hour of combustion efficiency failures.</p> <p>Verify that, within 30 days of stack tests, engineering evaluations are submitted</p>

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174-7(e) and (f)).	<p>to the Commissioner.</p> <p>(NOTE: Engineering evaluations include details of the cause or reasons for failures to meet combustion efficiencies as well as recommendations of how and when corrections or adjustments are to be made.)</p> <p>Verify that, for resources recovery facilities, the provisions of approved source shutdown and startup plans are implemented whenever monitoring equipment for combustion efficiencies breakdown, fail, or undergo deliberate shutdown.</p> <p>Verify that, for resources recovery facilities, the provisions of approved source shutdown and startup plans are implemented whenever combustion efficiencies are less than required levels for three consecutive hours.</p>
<p><b>AE.5.7.CT.</b> Resources recovery facilities must have shutdown and startup plans approved by the Commissioner (Conn. Agencies Regs. 22a-174-7(g)).</p>	<p>Verify that resources recovery facilities have shutdown and startup plans approved by the Commissioner.</p> <p>Verify that the terms and conditions of the plans are followed.</p>
<p><b>Hazardous Air Pollutant Emissions</b></p>	
<p><b>AE.5.8.CT.</b> Resources recovery facilities, incinerators, stationary sources, and modifications must limit emissions of hazardous air pollutants (Conn. Agencies Regs. 22a-174-29(b)(1) and (b)(2)).</p>	<p>Verify that resources recovery facilities, incinerators, stationary sources, and modifications do not emit hazardous air pollutants in excess of the maximum allowable stack concentration (see Table 1 of Appendix 1-1) unless the Commissioner has issued a permit allowing excesses.</p> <p>Verify that resources recovery facilities, incinerators, stationary sources, and modifications (excluding sources for which a permit-to-construct application was submitted to the Commissioner prior to 1 July 1986) do not exceed maximum allowable stack concentrations in the stack.</p> <p>Verify that the terms and conditions of any permits allowing excesses of hazardous air pollutant limitations are met.</p>
<p><b>Industrial Emergency Episodes</b></p>	

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<p><b>AE.5.9.CT.</b> Installations/CW facilities must follow the directives of the Commissioner when industrial air pollution emergency episodes are declared (Conn. Agencies Regs. 22a-174-6(a) through (c)).</p> <p><b>Monitoring</b></p>	<p>Verify that installations/CW facilities follow the directives of the Commissioner when industrial air pollution emergency episodes are declared for the following stages:</p> <ul style="list-style-type: none"> <li>- alert</li> <li>- warning</li> <li>- emergency.</li> </ul> <p>Verify that the requirements of Appendix 1-4 are followed for sources which emit or have the capacity to emit more than 100 tons of pollutants per year.</p> <p>(NOTE: Once any stage of an episode is declared, that stage remains in effect until the Commissioner announces its termination.)</p>
<p><b>AE.5.10.CT.</b> Sources must meet general monitoring requirements (Conn. Agencies Regs. 22a-174-4(a)(1), (a)(3), and (c)(2)).</p>	<p>Verify that air pollution sources utilize and maintain monitoring equipment, establish monitoring records, and report monitoring information as prescribed by the Commissioner.</p> <p>(EXEMPTION: When, to the satisfaction of Commissioner, it can be demonstrated that sources are physically incapable of violating emissions standards, sources need not utilize monitoring devices and methods.)</p> <p>Verify that records required by the Commissioner are kept current in a form allowing easy inspection for at least 3 yr.</p>
<p><b>AE.5.11.CT.</b> Required monitoring equipment must meet operating requirements (Conn. Agencies Regs. 22a-174-4(e)).</p>	<p>Verify that required monitoring equipment is maintained and operated at all times sources are in operation.</p> <p>Verify that, except for necessary maintenance, monitoring devices are not shut down while sources are in operation or are emitting air pollutants.</p> <p>Verify that, if the monitoring equipment fails, all reasonable [not defined] measures are taken to return devices to service as soon as possible.</p> <p>Verify that, if monitoring equipment is expected to be shutdown for more than 72 h, the Commissioner is given prompt written notification of the shutdown as well as the steps being taken to return devices to service.</p> <p>Verify that monitoring equipment is not adjusted or altered in a manner which would produce false readings or results.</p>

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<p><b>Odorous Emissions</b></p> <p><b>AE.5.12.CT.</b> Installations/CW facilities must not violate odor control standards (Conn. Agencies Regs. 22a-174-23(a), (j), and (k)).</p>	<p>Verify that installations/CW facilities do not emit substances or combinations of substances which create or contribute to a nuisance of odor.</p> <p>(NOTE: An odor constitutes a nuisance if it is present with such intensity, characteristics, frequency, and duration that either of the following occurs:</p> <ul style="list-style-type: none"> <li>- it is, or can reasonably [not defined] be expected to be, injurious to public health or welfare</li> <li>- it unreasonably [not defined] interferes with the enjoyment of life or the use of property, considering the character and degree of injury to, or interference with, the health, general welfare, property, or use of property of the people affected, as well as the location of the pollution sources and the character of the area or the neighborhood affected.)</li> </ul> <p>(EXEMPTION: Agricultural or farming operations are exempt from odor control standards to the extent allowed by Connecticut General Statutes, 19a-341. Odor control standards do not apply to mobile sources or to structures occupied solely as dwellings containing six or fewer dwelling units.)</p> <p>(NOTE: See Appendix 1-5 for odor limit values.)</p>
<p><b>Permits and Registration</b></p> <p><b>AE.5.13.CT.</b> Stationary sources meeting specific criteria must comply with construction and operation permitting requirements (Conn. Agencies Regs. 22a-174-3).</p> <p><b>AE.5.14.CT.</b> Installations/CW facilities must meet Title V permit requirements (Conn. Agencies Regs. 22a-174-33(c)).</p>	<p>Verify that sources meeting the criteria set forth in Appendix 1-6 are not constructed or operated without their owner first applying for permits issued by the Commissioner.</p> <p>Verify that the terms and conditions of construction and operating permits are met.</p> <p>(NOTE: Title V permit requirements apply to Title V sources. See the definitions portion of this Air Emissions Management section for the meaning of the term Title V source.)</p> <p>(NOTE: Title V permit requirements do not apply to any premise which is defined as a Title V source solely because a stationary source on the premise is subject to one or more of the following:</p> <ul style="list-style-type: none"> <li>- standard of performance for a new residential wood heaters pursuant to 40</li> </ul>



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<p><b>AE.5.15.CT.</b> Existing stationary sources must meet registration requirements (Conn. Agencies Regs. 22a-174-2).</p>	<p>CFR 60, Subpart AAA</p> <ul style="list-style-type: none"> <li>- 40 CFR 61.145</li> <li>- accidental release requirements pursuant to 40 CFR 68</li> <li>- 40 CFR 61, Subpart I</li> <li>- 40 CFR 60, 61, 63, 68, or 72, if the source is exempt by the terms of such part or is exempted by the USEPA Administrator from the requirement of obtaining a Title V permit.)</li> </ul> <p>(NOTE: If a premise is subject Title V permit requirements, any stationary source subject to 40 CFR 61, Subpart I located at such premise is also be subject to Title V permit requirements.)</p> <p>(NOTE: Notwithstanding the definition of a Title V source, for the purpose of determining whether this section applies to a premise at which research and development operations are located, the owner or operator of the premise may calculate the emissions from the premise by subtracting the emissions from such research and development operations from the total emissions from such premise. The premise and research and development operations shall be separately evaluated for purposes of determining whether a Title V permit is required.)</p> <p>Verify that installations/CW facilities with sources subject to Title V permit requirements have applied for Title V permits according to the schedule published by the State of Connecticut.</p> <p>Verify that the terms and conditions of any Title V permits issued are met.</p> <p>Verify that stationary sources which existed on 1 February 1989 are registered with the Commissioner.</p> <p>(EXEMPTION: Registration requirements do not apply to stationary sources meeting the following criteria:</p> <ul style="list-style-type: none"> <li>- stationary sources previously granted permits</li> <li>- stationary sources for which permit application decisions are pending</li> <li>- stationary sources for which the owners/operators previously failed to apply for and receive valid permits</li> <li>- stationary sources already registered with the Department</li> <li>- stationary sources which must register solely because the maximum uncontrolled emissions of any individual air pollutant are 100 tons/yr or more.)</li> </ul> <p>Verify that, whenever registered sources undergo any of the following, the Commissioner is notified:</p> <ul style="list-style-type: none"> <li>- change in location</li> <li>- alteration which changes the amount of any air pollutant emitted</li> <li>- installation of air cleaning devices</li> <li>- transfer of registration certificate.</li> </ul>

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<p><b>Visible Emissions</b></p> <p><b>AE.5.16.CT.</b> Stationary sources must not exceed visible emissions limitations (Conn. Agencies Regs. 22a-174-18(a)(1) and (a)(3)).</p>	<p>Verify that stationary sources do not discharge visible emissions of a shade or density equal to or darker than number one on the Ringelmann Chart or 20 percent opacity.</p> <p>(NOTE: Stationary sources may discharge visible emissions for a period or periods aggregating not more than 5 min in any 60 min as long as air pollutants are of a shade or density not darker than number 2 on the Ringelmann Chart or 40 percent opacity.)</p> <p>(EXEMPTION: Open burning subject to and in compliance with the Connecticut open burning requirements of Conn. Agencies Regs. 22a-174-17, are not subject to visible emissions limitations.)</p> <p>(EXEMPTION: When the presence of uncombined water, such as water vapor, is the only reason for sources to violate visible emissions limitations, visible emissions limitations do not apply.)</p>

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<p><b>AE.15. FUEL-BURNING EQUIPMENT</b></p> <p><b>NOx Emissions</b></p> <p><b>AE.15.1.CT.</b> Fuel-burning equipment must not exceed NOx emissions limitations (Conn. Agencies Regs. 22a-174-22(b)(1) through (b)(5), (c), (d)(2), (d)(3), (e), (f), and (g)) [Revised October 1997].</p>	<p>(NOTE: NOx emissions limitations apply to the following:</p> <ul style="list-style-type: none"> <li>- reciprocating engines that have a maximum rated capacity of 3 MBtu/h or more, located at premises which are major stationary sources of NOx</li> <li>- fuel-burning equipment, other than reciprocating engines, that have a maximum rated capacity of 5 MBtu/h or more, located at premises which are major stationary sources of NOx</li> <li>- equipment that burns fuel for heating materials, having a maximum rated capacity of 5 MBtu/h or more, located at premises which are major stationary sources of NOx</li> <li>- waste combustors that have design capacities of 2000 lb/hr or more of waste, located at premises which are major stationary sources of NOx</li> <li>- fuel-burning equipment, waste combustors, or process sources that have potential NOx emissions in excess of the following: <ul style="list-style-type: none"> <li>- 137 lb during any day from 1 May through 30 September of any year, located in a severe nonattainment area for ozone</li> <li>- 274 lb during any day from 1 May through 30 September of any year, located in a serious nonattainment area for ozone.</li> </ul> </li> <li>- emergency engines operating for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be "moderate to unhealthy", "unhealthy", or "very unhealthy".)</li> </ul> <p>(NOTE: See definitions portion of the Air Emissions Management section for the meaning of the term waste combustor.)</p> <p>(EXEMPTION: NOx emissions limitations do not apply to the following:</p> <ul style="list-style-type: none"> <li>- mobile sources</li> <li>- waste combustors on premises in a severe nonattainment area for ozone from which the actual emissions of NOx do not exceed 25 tons in any calendar year or 137 lb on any day from 1 May through 30 September</li> <li>- waste combustors on premises in a serious nonattainment area for ozone from which the actual emissions of NOx do not exceed 50 tons in any calendar year or 274 lb on any day from 1 May through 30 September</li> <li>- emergency engines, except those operating for routine, scheduled testing or maintenance on any day for which the Commissioner has forecast that ozone levels will be "moderate to unhealthy", "unhealthy", or "very unhealthy".)</li> </ul>

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	<p>Verify that fuel-burning equipment subject to NOx emissions limitations meet the following requirements:</p> <ul style="list-style-type: none"> <li>- comply with NOx emissions limitations in Appendix 1-7, Part A</li> <li>- comply with the requirements for multi-fuel sources in Appendix 1-7, Part B</li> <li>- reduce NOx emissions rates by 40 percent</li> <li>- meet any reconstruction and schedule modification requirements specified in permits</li> <li>- meet the terms and conditions of any permit extensions.</li> </ul> <p>Verify that fuel-burning equipment which has reduced its NOx emission rate by 40 percent does not exceed the NOx emissions limitation specified in its permit.</p>
<p><b>AE.15.2.CT.</b> Fuel-burning equipment subject to NOx emissions limitations must meet emissions testing and monitoring requirements (Conn. Agencies Regs. 22a-174-22(k)).</p>	<p>Verify that fuel-burning equipment subject to NOx emissions limitations has been tested for compliance with NOx emissions standards and that compliance has been demonstrated to the satisfaction of the Commissioner.</p> <p>Verify that fuel-burning equipment subject to NOx emissions limitations which does not utilize continuous monitoring as a method of demonstrating compliance is tested once every 5 yr.</p>
	<p>Verify that fuel-burning equipment subject to NOx emissions limitations which emitted more than 100 tons of NOx from a single stack in any calendar year beginning 1 January 1990 operates a certified continuous NOx monitor for each stack.</p>
	<p>Verify that, for fuel-burning equipment operating a certified continuous NOx monitor, the Commissioner is notified in writing at least 30 days before any quality assurance testing occurs.</p>
<p><b>AE.15.3.CT.</b> Fuel-burning equipment subject to NOx emissions limitations must meet reporting and record-keeping requirements (Conn. Agencies Regs. 22a-174-22(l)) [Revised October 1997].</p>	<p>Verify that, for fuel-burning equipment subject to NOx emissions limitations, the following records are maintained:</p> <ul style="list-style-type: none"> <li>- for emergency engines, daily records of the operating hours of each engine, identifying emergency and non-emergency use</li> <li>- for waste combustors exempt from NOx limitations (see AE.15.1.CT.), records of the fuel use, continuous emissions monitoring, and operating hours to determine whether NOx emissions on any day from 1 May through 30 September are in excess of 137 lb for a premise located in a severe nonattainment area for ozone or 274 lb for a premise located in serious nonattainment area for ozone</li> <li>- monthly and annual records of fuel use, continuous emissions monitoring, and operating hours to determine whether NOx emissions in any calendar</li> </ul>

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	<p>year are in excess of 25 tons per year for a premise located in a severe nonattainment area for ozone or 50 tons for a premise located in a serious nonattainment area for ozone</p> <ul style="list-style-type: none"> <li>- records of all tune-ups, repairs, replacement of parts, and other maintenance</li> <li>- copies of all documents submitted to the Commissioner</li> <li>- for sources required to operate continuous emissions monitors for NOx, all charts, electronically stored data, and printed records produced by the monitors</li> <li>- procedures for calculating NOx emissions rates</li> <li>- records of the dates, times, and places of all emissions testing performed, including the persons performing the measurements, the testing methods used, the operating conditions at the time of testing, and the results of the testing</li> <li>- for sources required to operate continuous emissions monitors for NOx, records of all performance evaluations, calibration checks and adjustments on each monitor, maintenance procedures, and all data used to complete quarterly reports.</li> </ul> <p>Verify that the following reports are submitted to the Commissioner within the time frame specified:</p> <ul style="list-style-type: none"> <li>- for fuel-burning equipment emitting 100 tons/yr or less of NOx, written reports of the results of the testing within 30 days after completing certification tests</li> <li>- for fuel-burning equipment emitting more than 100 tons of NOx in any calendar year beginning 1 January 1990, written reports of the results of the testing within 60 days after completing the tests</li> <li>- for fuel-burning equipment required to utilize continuous monitors of NOx, quarterly reports of excess emissions and continuous emissions monitoring malfunctions on or before the following dates: <ul style="list-style-type: none"> <li>- 30 January</li> <li>- 30 April</li> <li>- 30 July</li> <li>- 30 October.</li> </ul> </li> </ul> <p>Verify that excess emissions reports include the following information:</p> <ul style="list-style-type: none"> <li>- date and time of commencement and completion of the period</li> <li>- magnitude and suspected cause of the excess emissions</li> <li>- all actions taken to correct the excess emissions.</li> </ul> <p>Verify that continuous emissions monitoring malfunctions reports include the date and time of the commencement and correction of the malfunction and all actions taken to correct the malfunction.</p> <p>Verify that, for fuel-burning equipment subject to NOx limitations, annual NOx emissions reports are submitted by 15 April.</p>

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<b>Particulate Matter Emissions</b>  <b>AE.15.4.CT.</b> Fuel-burning equipment must not exceed particulate matter emissions limitations (Conn. Agencies Regs. 22a-174-18(d)(1)).	<p>Verify that records and reports are maintained onsite for at least 5 yr.</p> <p>Verify that, if records and reports are maintained offsite, the installation/CW facility has written approval from the Commissioner for the offsite location.</p> <p>Verify that fuel-burning equipment does not exceed the following particulate matter emissions limitations:</p> <ul style="list-style-type: none"> <li>- for sources required have permit (see AE.5 and Appendix 1-6) [Note A], the limit is 0.10 lb of particulate matter/MBtu heat input, regardless of the type of fuel used</li> <li>- for sources required to be registered (see AE.5) [Note B], using residual oil, the limit is 0.14 lb of particulate matter/MBtu heat input</li> <li>- for all other sources, using any type of fuel except residual oil, the limit is 0.20 lb of particulate matter/MBtu heat input.</li> </ul> <p>[Note A: except those sources required to have operating permits because they are subject to construction permit requirements in effect prior to 1 July 1979, the construction of which commenced prior to 1 June 1972, but which did not begin operation prior to 1 October 1972.]</p> <p>[Note B: including those sources required to have operating permits because they are subject to construction permit requirements in effect prior to 1 July 1979, the construction of which commenced prior to 1 June 1972, but which did not begin operation prior to 1 October 1972.]</p> <p>(NOTE: The heat input value used is the actual firing rate of the fuel-burning equipment.)</p> <p>Verify that have particulate control equipment in place as of 1 June 1972 is maintained in proper [not defined] operation.</p>
<b>Visible Emissions</b>  <b>AE.15.5.CT.</b> Fuel-burning equipment burning coal must meet smoke and opacity monitoring requirements	<p>(EXEMPTION: Smoke and opacity monitoring requirements do not apply to the following:</p> <ul style="list-style-type: none"> <li>- coal-burning space heaters installed in single family homes on or before 1 May 1975 as long as only anthracite coal with a sulfur content of less than</li> </ul>

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<p>(Conn. Agencies Regs. 22a-174-4(b)(1)(i), (b)(2), (c)(2), and (e)).</p>	<p>0.75 percent by weight (dry basis) is used for fuel</p> <ul style="list-style-type: none"> <li>- coal-burning equipment in commercial establishments in regular operation on or before 1 May 1975 as long as the following are true:               <ul style="list-style-type: none"> <li>- only anthracite coal with a sulfur content of less than 0.75 percent by weight {dry basis} is used for fuel</li> <li>- less than 75 tons/yr is consumed</li> <li>- coal-burning equipment used for historical demonstrations or exhibits (including, but not limited to, blacksmith's forges, steam locomotives, and steamboats) as long as sources do not burn fuel containing sulfur in excess of 1.5 percent by weight (dry basis).</li> </ul> </li> </ul> <p>Verify that fuel-burning equipment burning coal utilize, maintain, and operate approved smoke and opacity monitors.</p> <p>Verify that records required by the Commissioner are kept current in a form allowing easy inspection for at least 3 yr.</p> <p>Verify that required monitoring equipment is maintained and operated at all times sources are in operation.</p> <p>Verify that, except for necessary maintenance, monitoring devices are not shut down while sources are in operation or are emitting air pollutants.</p> <p>Verify that, if the monitoring equipment fails, all reasonable [not defined] measures are taken to return devices to service as soon as possible.</p> <p>Verify that, if monitoring equipment is expected to be shutdown for more than 72 h, the Commissioner is given prompt written notification of the shutdown as well as the steps being taken to return devices to service.</p> <p>Verify that monitoring equipment is not adjusted or altered in a manner which would produce false readings or results.</p>
<p><b>AE.15.6.CT.</b> Fuel-burning equipment burning liquid or solid fuels with a maximum rated heat input of 250 MBtu/h or more must meet smoke and opacity monitoring requirements (Conn. Agencies Regs. 22a-174-4(b)(1)(ii), (b)(3), (c)(2), and (e)).</p>	<p>(EXEMPTION: Smoke and opacity monitoring requirements do not apply to the following:</p> <ul style="list-style-type: none"> <li>- standby fuel-burning equipment used only to provide emergency heat or power, operating not more than a total of 168 h in any calendar year</li> <li>- gas turbines equipped with any smoke control apparatus which, according to the Commissioner, is adequate to prevent visible discharges of an opacity greater than that designated as number one on the Ringelmann Chart or 20 percent opacity.)</li> </ul> <p>Verify that fuel-burning equipment burning liquid or solid fuels with a maximum rated heat input of 250 MBtu or more utilize, maintain, and operate approved smoke and opacity monitors.</p>

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	<p>Verify that records required by the Commissioner are kept current in a form allowing easy inspection for at least 3 yr.</p> <p>Verify that required monitoring equipment is maintained and operated at all times sources are in operation.</p> <p>Verify that, except for necessary maintenance, monitoring devices are not shut down while sources are in operation or are emitting air pollutants.</p> <p>Verify that, if the monitoring equipment fails, all reasonable [not defined] measures are taken to return devices to service as soon as possible.</p> <p>Verify that, if monitoring equipment is expected to be shutdown for more than 72 h, the Commissioner is given prompt written notification of the shutdown as well as the steps being taken to return devices to service.</p> <p>Verify that monitoring equipment is not adjusted or altered in a manner which would produce false readings or results.</p>



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<p><b>AE.25. MISCELLANEOUS INCINERATORS</b></p> <p><b>Odorous Emissions</b></p> <p><b>AE.25.1.CT.</b> Incinerators must not violate odor control standards (Conn. Agencies Regs. 22a-174-18(c)(3)(iv) and (c)(6)).</p> <p><b>Operating and Testing Requirements</b></p> <p><b>AE.25.2.CT.</b> Incinerators must meet operating and testing requirements (Conn. Agencies Regs. 22a-174-18(c)(4) through (c)(7)).</p>	<p>Verify that incinerators do not emit substances or combinations of substances which create or contribute to a nuisance of odor.</p> <p>(NOTE: An odor constitutes a nuisance if it is present with such intensity, characteristics, frequency, and duration that either of the following occurs:</p> <ul style="list-style-type: none"> <li>- it is, or can reasonably [not defined] be expected to be, injurious to public health or welfare</li> <li>- it unreasonably [not defined] interferes with the enjoyment of life or the use of property, considering the character and degree of injury to, or interference with, the health, general welfare, property, or use of property of the people affected, as well as the location of the pollution sources and the character of the area or the neighborhood affected.)</li> </ul> <p>(EXEMPTION: Agricultural or farming operations are exempt from odor control standards to the extent allowed by Connecticut General Statutes, 19a-341. Odor control standards do not apply to mobile sources or to structures occupied solely as dwellings containing six or fewer dwelling units.)</p> <p>(NOTE: See Appendix 1-5 for odor limit values.)</p> <p>Verify that approved operating procedures and rated burning capacities of incinerators are posted at convenient places as near as practical to the points of incinerator operation.</p> <p>Verify that incinerators are not utilized unless all components which are connected to, attached to, or serving the incinerators, and which affect air pollution, are functioning properly [not defined] and are being used according to construction and operating permit requirements.</p>

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<p><b>Visible Emissions</b></p> <p><b>AE.25.3.CT.</b> Incinerators with a maximum rated input in excess of 2000 lb/h must meet smoke and opacity monitoring requirements (Conn. Agencies Regs. 22a-174-4(b)(1)(iii), (c)(2), and (e)).</p> <p><b>AE.25.4.CT.</b> Incinerators must not exceed visible emissions limitations (Conn. Agencies Regs. 22a-174-18(c)(3)(ii) and (c)(6)).</p>	<p>Verify that incinerators do not emit hazardous materials defined and limited by the Commissioner.</p> <p>Verify that emissions tests are conducted at the maximum-rated burning capacities of the incinerators being tested.</p> <p>(NOTE: The burning capacities of incinerators are the manufacturers' or designers' guaranteed maximum rates or other rates determined by the Commissioner. The total of the capacities of all furnaces within one system is considered as the incinerator capacity.)</p> <p>(EXEMPTION: Requirements (except for the hazardous materials emissions prohibition) do not apply to incinerators utilized at structures occupied solely as dwellings containing six or fewer dwelling units.)</p> <p>Verify that incinerators with a maximum rated input in excess of 2000 lb/h or more utilize, maintain, and operate approved smoke and opacity monitors.</p> <p>Verify that records required by the Commissioner are kept current in a form allowing easy inspection for at least 3 yr.</p> <p>Verify that required monitoring equipment is maintained and operated at all times sources are in operation.</p> <p>Verify that, except for necessary maintenance, monitoring devices are not shut down while sources are in operation or are emitting air pollutants.</p> <p>Verify that, if the monitoring equipment fails, all reasonable [not defined] measures are taken to return devices to service as soon as possible.</p> <p>Verify that, if monitoring equipment is expected to be shutdown for more than 72 h, the Commissioner is given prompt written notification of the shutdown as well as the steps being taken to return devices to service.</p> <p>Verify that incinerators do not discharge visible emissions of a shade or density equal to or darker than number one on the Ringelmann Chart or 20 percent opacity.</p> <p>(NOTE: Incinerators may discharge visible emissions for a period or periods aggregating not more than 5 min in any 60 min as long as air pollutants are of a shade or density not darker than number 2 on the Ringelmann Chart or 40</p>

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<p><b>AE.25.5.CT.</b> Incinerators must not emit particulates of unburned waste or ash that are individually large enough to be discernible by the human eye (Conn. Agencies Regs. 22a-174-18(c)(3)(iii) and (c)(6)).</p> <p><b>VOC Emissions</b></p> <p><b>AE.25.6.CT.</b> Thermal incinerators meeting specific criteria must continuously monitor the exhaust gas temperature (Conn. Agencies Regs. 22a-174-20(aa)(8)(A) and (aa)(10)).</p> <p><b>AE.25.7.CT.</b> Catalytic incinerators meeting specific criteria must continuously monitor the exhaust gas and the temperature rise across the catalyst bed (Conn. Agencies Regs. 22a-174-20(aa)(8)(B), (aa)(9), and</p>	<p>percent opacity.)</p> <p>(EXEMPTION: When the presence of uncombined water, such as water vapor, is the only reason for sources to violate visible emissions limitations, visible emissions limitations do not apply.)</p> <p>(EXEMPTION: Requirements do not apply to incinerators utilized at structures occupied solely as dwellings containing six or fewer dwelling units.)</p> <p>Verify that incinerators do not emit particulates of unburned waste or ash which are individually large enough to be discernible by the human eye.</p> <p>(EXEMPTION: Requirements do not apply to incinerators utilized at structures occupied solely as dwellings containing six or fewer dwelling units.)</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that thermal incinerators meeting the following criteria continuously monitor the exhaust gas temperature:</p> <ul style="list-style-type: none"> <li>- are major stationary sources</li> <li>- are subject to the VOC control requirements of Conn. Agencies Regs. 22a-174-20.</li> </ul> <p>Verify that monitoring records are maintained for at least 2 yr.</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that catalytic incinerators meeting the following criteria continuously monitor the exhaust gas temperature and the temperature rise across the catalyst bed:</p> <ul style="list-style-type: none"> <li>- are major stationary sources</li> </ul>

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(aa)(10)).	<p>- are subject to the VOC control requirements of Conn. Agencies Regs. 22a-174-20.</p> <p>Verify that, for catalytic incinerators used to control VOC emissions from stationary sources, the date of each change of the catalyst in the bed is recorded.</p> <p>Verify that monitoring records are maintained for at least 2 yr.</p>

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<p><b>AE.55. GASOLINE/FUELS</b></p> <p><b>AE.55.1.CT.</b> Fuels used or burned must not exceed sulfur content limitations (Conn. Agencies Regs. 22a-174-19(a)(2), (a)(3), (a)(7), (a)(9)).</p>	<p>Verify that fuels containing sulfur in excess of 1 percent by weight (dry basis) are not used or burned.</p> <p>Verify that fuel burning devices with heat inputs of 250,000 Btu/h or more do not burn any solid fuels unless one of the following has occurred:</p> <ul style="list-style-type: none"> <li>- the Commissioner has approved the use of solid fuels</li> <li>- it has been demonstrated to the Commissioner that emissions of sulfur compounds are 1.1 lb/MBtu heat input or less.</li> </ul> <p>(NOTE: Under conditions of fuel shortage emergencies, as determined by the Commissioner, fuels with higher percentages of sulfur may be permitted by the express approval of the Commissioner for temporary periods of time.)</p> <p>Verify that the terms and conditions of any waivers of sulfur content limitations issued by the Commissioner are met.</p> <p>(EXEMPTION: Sulfur fuel content limitations do not apply to fuels used by oceangoing vessels.)</p> <p>(EXEMPTION: Sulfur fuel content limitations do not apply to coal-burning equipment used primarily for educational or historical demonstrations or exhibits as long as emissions from the equipment do not interfere with the attainment and maintenance of air quality standards. Exempt sources include, but are not limited to, blacksmith's forges, steam locomotives, and steamboats as long as they do not use or burn fuel with a sulfur content in excess of 1.5 percent by weight (dry basis).)</p> <p>Verify that the Commissioner has been notified of any coal-burning sources claiming exemption from sulfur fuel content limitations on the basis of educational or historical use.</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p>

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<p><b>AE.60. PRINTING PRESSES AND GRAPHIC ARTS</b></p> <p><b>AE.60.1.CT.</b>      Packaging rotogravure, publication rotogravure, and flexographic printing operations must control VOC emissions (Conn. Agencies Regs. 22a-174-20(v)).</p>	<p>(NOTE: These requirements apply to printing lines with actual emissions of 40 lb/day or more in any one day or to premises with potential emissions from all printing operations of 50 tons or more per calendar year in areas designated as severe nonattainment areas for ozone. Once printing lines become subject to these requirements, they remain subject to the requirements even if daily emissions later fall below threshold amounts.)</p> <p>Verify that VOC emissions from packaging rotogravure, publication rotogravure, and flexographic printing operations are controlled by one of the following means:</p> <ul style="list-style-type: none"> <li>- volatile fraction of each ink, as it is applied to the substrate, contains 25.0 percent by volume or less of VOC and 75.0 percent by volume or more of water and exempt VOCs (see Appendix 1-2)</li> <li>- each ink, as it is applied to the substrate, less water and exempt VOCs (see Appendix 1-2), contains 60.0 percent by volume or more nonvolatile material</li> <li>- one of the following control devices is installed and operated: <ul style="list-style-type: none"> <li>- carbon adsorption system that reduces VOC emissions from the capture system by at least 90.0 percent by weight over the adsorption cycle or 24 h, whichever is shorter</li> <li>- incineration system that oxidizes to CO<sub>2</sub> and water 90.0 percent of the nonmethane VOCs (measured as total combustible carbon) entering the incinerator per hour</li> <li>- alternative control system with an efficiency equivalent to or greater than 90.0 percent, approved by the Commissioner.</li> </ul> </li> </ul> <p>Verify that capture control systems are used in conjunction with control devices, are operated according to good engineering practice, and have an overall reduction of VOCs per hour of at least the following:</p> <ul style="list-style-type: none"> <li>- 75.0 percent when publication rotogravure processes are employed</li> <li>- 65.0 percent when packaging rotogravure processes are employed</li> <li>- 60.0 percent when flexographic printing processes are employed.</li> </ul> <p>Verify that, if the Commissioner allows or imposes alternative VOC control requirements, operations meet the alternative requirements.</p>
<p><b>AE.60.2.CT.</b>      Packaging</p>	<p>Verify that packaging rotogravure, publication rotogravure, and flexographic</p>

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<p>rotogravure, publication rotogravure, and flexographic printing operations subject to VOC emissions control requirements must maintain specific records (Conn. Agencies Regs. 22a-174- 20(aa)(1) and (aa)(10)).</p>	<p>printing operations subject to VOC emissions control requirements maintain daily records of all coatings and diluents used for at least 2 yr.</p> <p>Verify that records for each individual machine, operation, or coating line are maintained and contain the following information:</p> <ul style="list-style-type: none"> <li>- description of the coating including the coating name and the coating density in pounds per gallon</li> <li>- VOC content by volume and weight</li> <li>- water and exempt VOC content by weight</li> <li>- non-VOC content by volume and weight</li> <li>- amount of each coating used in gallons</li> <li>- total amount of diluent used for each coating in pounds and gallons.</li> </ul>

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<p><b>AE.65. FUGITIVE EMISSIONS</b></p> <p><b>AE.65.1.CT.</b> Installations/ CW facilities must take reasonable precautions to prevent particulate matter from becoming airborne (Conn. Agencies Regs. 22a-174-18(b)).</p>	<p>Verify that reasonable precautions are taken to prevent particulate matter from becoming airborne during the following activities:</p> <ul style="list-style-type: none"> <li>- handling, transporting, or storing materials</li> <li>- constructing, altering, repairing, or demolishing buildings and their appurtenances</li> <li>- using roads during building construction or demolition activities.</li> </ul> <p>(NOTE: Reasonable precautions include the following:</p> <ul style="list-style-type: none"> <li>- use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land</li> <li>- application of asphalt, oil, water, suitable chemicals, or coverage on materials stockpiles and other surfaces which can give rise to airborne dusts</li> <li>- use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials</li> <li>- employment of adequate [not defined] containment methods during sandblasting or other similar operations</li> <li>- covering, at all times when in motion, open-bodied trucks and trains transporting materials likely to give rise to airborne dusts</li> <li>- prompt removal of earth or other material from paved streets onto which earth or other material has been deposited by trucking or earth-moving equipment, erosion by water, or other means</li> <li>- other practices prescribed by the Commissioner.)</li> </ul> <p>(EXEMPTION: Agricultural activities are exempt from taking these reasonable precautions.)</p> <p>Verify that agricultural activities (e.g., tilling of land and application of fertilizers) are conducted in a manner which minimizes dust from becoming airborne.</p> <p>Verify that visible emissions which exist near ground level are not discharged beyond the lot line of the property on which the emissions originate.</p> <p>Verify that visible emissions do not impinge on buildings or structures in a manner which diminishes public health, safety, or enjoyment of life.</p> <p>Verify that particulate matter emissions are not discharged into the open air in a manner which causes nuisances.</p>



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<p><b>DRY CLEANING OPERATIONS</b></p> <p><b>AE.75.</b></p> <p><b>PERCHLOROETHYLENE</b></p> <p><b>AE.75.1.CT.</b> Perchloroethylene dry cleaning operations must control VOC emissions (Conn. Agencies Regs. 22a-174-20(w)).</p>	<p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that perchloroethylene dry cleaning operations meet the following requirements to control VOC emissions:</p> <ul style="list-style-type: none"> <li>- vent all dryer exhausts through carbon adsorption systems or equally effective control devices, limiting VOC emissions at all times to no more than 100 ppmv as measured before dilution</li> <li>- maintain all system components so as to prevent the leaking of VOCs and take measures to prevent perceptible vapor losses from gaskets, seals, ducts, and related equipment</li> <li>- treat all diatomaceous earth filters so that the residue contains no more than 25 kg of VOC per 100 kg of wet waste material</li> <li>- reduce VOCs from all solvent stills to no greater than 60 kg per 100 kg of wet waste material</li> <li>- drain all filtration cartridges in the filter housing for at least 24 h before discarding the cartridges so that VOCs are not emitted into the atmosphere.</li> </ul> <p>(EXEMPTION: The requirement to vent all exhausts through carbon adsorption systems does not apply to the following as long as exempt status is approved by the Commissioner:</p> <ul style="list-style-type: none"> <li>- dry cleaning operations lacking adequate space or sufficient steam capacity to accommodate systems</li> <li>- dry cleaning operations demonstrating economic hardship due to compliance with requirements.)</li> </ul>

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<p><b>AE.80. ACID PRODUCTION UNITS</b></p> <p><b>AE.80.1.CT.</b> Sulfuric acid plants must not exceed sulfur emissions limitations (Conn. Agencies Regs. 22a-174-19(b)).</p>	<p>Verify that sulfur acid plants do not emit sulfur oxides in excess of 6.5 lb/ton (3.25 kg/ metric ton) of 100 percent acid produced.</p>

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<b>AE.100.</b> <b>COATING OPERATIONS</b>	<p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p>
<b>AE.100.1.CT.</b> Installations/ CW facilities must meet architectural coating require- ments (Conn. Agencies Regs. 22-174-20(g)(2), (g)(3), (h)).	<p>Verify that installations/CW facilities do not utilize architectural coatings purchased in containers of greater than 1-qt (0.95-L) capacities unless the solvent composition is nonhighly photochemically reactive.</p> <p>Verify that installations/CW facilities do not thin or dilute for application architectural coatings with highly photochemically reactive solvents purchased in containers of greater than 1-qt (0.95-L) capacities.</p> <p>(NOTE: See Appendix 1-8 for the classification of solvents, including highly photochemically reactive solvents.)</p> <p>(EXEMPTION: The Commissioner may exempt sources from these requirements.)</p>

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<p><b>DEGREASING OPERATIONS</b></p> <p><b>AE.116. Cold Cleaning</b></p> <p><b>AE.116.1.CT.</b> Installations/ CW facilities must restrict the emissions of VOCs from cold cleaning units (Conn. Agencies Regs. 22a-174-20(1)(3)).</p>	<p>(NOTE: Metal cleaning requirements do not apply to equipment that uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane (Conn. Agencies Regs. 22a-174-20(1)(2)(C)).</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc)).</p> <p>Verify that cold cleaners meet the following equipment specifications and operating requirements:</p> <ul style="list-style-type: none"> <li>- the cover of the cleaning device is designed to be easily operated with one hand</li> <li>- an internal drainage facility allows parts to be enclosed under the cover while draining</li> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner that more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> <li>- the cover remains closed when parts are not being handled in the cleaner for 2 min or more, or when the device is not in use</li> <li>- cleaned parts are drained for at least 15 s, or until dripping ceases, whichever is longer</li> <li>- if used, the degreasing solvent spray is a solid, fluid stream (not a fine, atomized or shower-type spray) at a pressure not to exceed 10 psi as measured at the pump outlet and does not spray outside the confines of the cold cleaning unit</li> <li>- if the solvent vapor pressure is greater than 4.3 kPa (33 mm Hg or 0.6 psi) measured at 38 °C (100 °F), or if the solvent is heated above 50 °C (120 °F) one of the following control devices is used: <ul style="list-style-type: none"> <li>- freeboard that gives a freeboard ratio greater than or equal to 0.7</li> <li>- water cover (solvent must be insoluble in and heavier than water)</li> <li>- other systems of equivalent control, equal to that of a refrigerated chiller or carbon adsorption approved by the Commissioner</li> </ul> </li> <li>- drafts are minimized across the top of each cold cleaning unit so that, when the cover is open, the unit is not exposed to drafts greater than 40 m/min [≈131 ft/ min] as measured between 1 and 2 m [≈39.37 and ≈78.74 in.] upwind, and at the same elevation as the tank lip</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until the leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul>

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	(NOTE: The drainage facility may be external for applications if an internal type cannot fit into the cleaning system.)

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<p><b>DEGREASING OPERATIONS</b></p> <p><b>AE.117. Vapor Cleaning</b></p> <p><b>AE.117.1.CT.</b> Installations/ CW facilities must restrict the emissions of VOCs from open top vapor degreasers (Conn. Agencies Regs. 22a-174- 20(1)(2)(A) and (1)(4)).</p>	<p>(NOTE: Metal cleaning requirements not apply to equipment that uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane (Conn. Agencies Regs. 22a-174-20(1)(2)(C).)</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that the open top vapor degreasers meet the following equipment specifications and operating requirements:</p> <ul style="list-style-type: none"> <li>- the cover of the vapor degreaser can be opened and closed easily without disturbing the vapor zone</li> <li>- the following safety switches are provided: <ul style="list-style-type: none"> <li>- a condenser flow switch and device that shuts off the sump heat if the condenser coolant is not circulating or if the vapor level rises above the height of the primary condenser</li> <li>- a spray safety switch that shuts off the spray pump if the vapor level drops more than 10 cm (4 in.) below the lowest condensing coil</li> </ul> </li> <li>- one of the following control devices is used: <ul style="list-style-type: none"> <li>- powered cover, if the freeboard ratio is greater than or equal to 0.75, and if the degreaser opening is greater than 1 m<sup>2</sup> (10 ft<sup>2</sup>)</li> <li>- refrigerated chiller (not applicable to open top degreasers with an open area smaller than 1 m<sup>2</sup> (10.8 ft<sup>2</sup>))</li> <li>- enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser) (not applicable to open top degreasers with an open area smaller than 1 m<sup>2</sup> (10.8 ft<sup>2</sup>))</li> <li>- carbon adsorption system, with ventilation greater than or equal to 15 m<sup>3</sup>/min/m<sup>2</sup> (50 ft<sup>3</sup>/min/ft<sup>2</sup>) of solvent/vapor area (when cover is open), and exhausting less than 25 ppm of degreasing solvent averaged each complete adsorption cycle (not applicable to open top degreasers with an open area smaller than 1 m<sup>2</sup> (10.8 ft<sup>2</sup>))</li> <li>- a control system demonstrated to have control efficiency equivalent to or greater than that required of the carbon adsorption system (not applicable to open top degreasers with an open area smaller than 1 m<sup>2</sup> (10.8 ft<sup>2</sup>))</li> </ul> </li> <li>- the cover is closed at all times, except when processing workloads through the degreaser</li> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner so more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> <li>- solvent carryout is minimized by: <ul style="list-style-type: none"> <li>- racking parts to allow complete drainage</li> </ul> </li> </ul>

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<p><b>AE.117.2.CT.</b> Installations/ CW facilities must restrict the emissions of VOCs from conveyorized degreasers (Conn. Agencies Regs. 22a- 174-20(1)(2)(B) and (1)(5)).</p>	<ul style="list-style-type: none"> <li>- moving parts in and out of the degreasing unit at less than 3.3. m/min (11 ft/min)</li> <li>- holding the parts in the vapor zone at least 30 s or until condensation ceases, whichever is longer</li> <li>- tipping out any pools of solvent on the cleaned parts before removal from the</li> <li>- allowing parts to dry within the degreasing unit for at least 15 s or until visually dry, whichever is longer</li> <li>- porous or adsorbent materials, such as cloth, leather, wood, or rope, are not degreased</li> <li>- the workload does not occupy more than half of the degreaser unit's open top area</li> <li>- the vapor level does not drop more than 10 cm (4 in.) when the workload is removed from the vapor zone</li> <li>- always spray within the vapor level</li> <li>- water is not visually detectable in solvent exiting the water separator</li> <li>- do not expose the degreasing unit to drafts greater than 40 m/min (131 ft/min) as measured between 1 and 2 m [<math>\approx 37.37</math> and <math>\approx 78.74</math> in.] upwind and at the same elevation as the tank lip, nor provide exhaust ventilation exceeding <math>20 \text{ m}^3/\text{min}/\text{m}^2</math> (<math>65 \text{ ft}^3/\text{min}/\text{ft}^2</math>) of degreasing unit open area, unless necessary to meet OSHA requirements</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until such leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul> <p>Verify that conveyorized degreasers meet the following equipment specifications and operating requirements:</p> <ul style="list-style-type: none"> <li>- one of the following control devices is used: <ul style="list-style-type: none"> <li>- refrigerated chiller</li> <li>- carbon adsorption system, with ventilation greater than or equal to <math>15 \text{ m}^3/\text{min}/\text{m}^2</math> (<math>50 \text{ ft}^3/\text{min}/\text{ft}^2</math>) or solvent/air area (when downtime covers are open), and exhausting less than 25 ppm of degreasing solvent by volume averaged over each complete adsorption cycle</li> <li>- a control system demonstrated to have control efficiency equivalent to or greater than that required of the carbon adsorption system described here</li> </ul> </li> <li>- the following safety switches are provided: <ul style="list-style-type: none"> <li>- a condenser flow switch and device that shuts off the sump heat if the condenser coolant is not circulating or if the vapor level rises above the height of the primary condenser</li> <li>- a spray safety switch which shuts off the spray pump or the conveyor if</li> </ul> </li> </ul>



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	<p>the vapor level drops more than 10 cm (4 in.) below the lowest condensing coil</p> <ul style="list-style-type: none"> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner that more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> <li>- parts are racked to allow complete drainage</li> <li>- conveyor speed is maintained at less than eleven 11 ft/min [<math>\approx 3.55</math> m/min]</li> <li>- a drying tunnel, rotating basket, or other equivalent method is used to prevent cleaned parts from carrying out solvent liquid</li> <li>- covers are placed over entrances and exits immediately after conveyors and exhausts are shut down and left in place until just prior to start-up</li> <li>- openings are minimized during operation so entrances and exits will silhouette workloads with an average degreasing unit opening of less than 10 cm (4 in.) or less than 10 percent of the width of the opening</li> <li>- water is not visually detectable in solvent exiting the water separator</li> <li>- do not provide exhaust ventilation exceeding <math>20 \text{ m}^3/\text{min}/\text{m}^2</math> (<math>65 \text{ ft}^3/\text{min}/\text{ft}^2</math>) of degreasing unit open area, unless necessary to meet OSHA requirements</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until the leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul> <p>(NOTE: Conveyorized degreasers with a solvent/air interface smaller than <math>2 \text{ m}^2</math> (<math>21.6 \text{ ft}^2</math>) are exempt from using one of the control devices.)</p>

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<p><b>MISCELLANEOUS VOC OPERATIONS</b></p> <p><b>AE.125.</b> <b>Blowdown and Emergency Relief Systems</b></p> <p><b>AE.125.1.CT.</b> Organic gases from vapor blowdown systems and emergency reliefs must be burned by smokeless flares or equally effective devices (Conn. Agencies Regs. 22a-174-20(e)(2)).</p> <p><b>Carbon Adsorbers</b></p> <p><b>AE.125.2.CT.</b> Carbon absorbers meeting specific criteria must continuously monitor the pressure drop across the absorber and the hydrocarbon level needed to determine breakthrough (Conn. Agencies Regs. 22a-174-20(aa)(8)(D) and (aa)(10)).</p> <p><b>Condensers and Refrigeration Systems</b></p> <p><b>AE.125.3.CT.</b> Condensers and refrigeration systems meeting specific criteria must continuously monitor the inlet temperature of the cooling</p>	<p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that organic gases from vapor blowdown systems and emergency reliefs are burned by smokeless flares or equally effective, Commissioner-approved devices.</p> <p>(EXEMPTION: The Commissioner may exempt sources from this requirement.)</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that carbon absorbers meeting the following criteria continuously monitor the pressure drop across the absorber and the hydrocarbon level needed to determine breakthrough:</p> <ul style="list-style-type: none"> <li>- are major stationary sources</li> <li>- are subject to the VOC control requirements of Conn. Agencies Regs. 22a-174-20.</li> </ul> <p>Verify that monitoring records are maintained for at least 2 yr.</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that condensers and refrigeration systems meeting the following criteria continuously monitor the inlet temperature of the cooling medium and the exhaust gas temperature:</p> <ul style="list-style-type: none"> <li>- are major stationary sources</li> </ul>

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medium and the exhaust gas temperature (Conn. Agencies Regs. 22a-174-20(aa)(8)(C) and (aa)(10)).	<ul style="list-style-type: none"> <li>- are subject to the VOC control requirements of Conn. Agencies Regs. 22a-174-20.</li> </ul> <p>Verify that monitoring records are maintained for at least 2 yr.</p>
<b>Organic Solvents Disposal and Evaporation</b>	(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)
<b>AE.125.4.CT.</b> Installations/CW facilities must limit the amount of organic solvents they dispose of in one day (Conn. Agencies Regs. 22a-174-20(j)).	Verify that, during any one day, installations/CW facilities do not dispose of more than 1.5 gal (5.7 L) of any VOC, or any materials containing more than 1.5 gal (5.7 L) of any VOC, by means which allow solvents to evaporate into the atmosphere.
<b>Organic Solvents Use</b>	<p>(NOTE: Organic materials emissions limitations do not apply to the following:</p> <ul style="list-style-type: none"> <li>- use of equipment for which other Connecticut air quality regulations are specifically issued or for which RACT is prescribed</li> <li>- spraying or other uses of insecticides, pesticides, or herbicides</li> <li>- VOC emissions from coating operations in which the VOC portion of the coating solvent is 20 percent or less by weight (Conn. Agencies Regs. 22a-174-20(f)(9).)</li> </ul> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>(NOTE: See Appendix 1-8 for the classification of solvents.)</p>
<b>AE.125.5.CT.</b> Sources in which organic solvents come into contact with flame or are baked, heat-cured, or heat-polymerized must not exceed organic materials emissions limitations (Conn. Agencies Regs. 22a-174-20(f)(1), (f)(5), and (f)(12)).	<p>(NOTE: Limitations apply to sources processing continuous webs, strips, or wires, including cleanup activities associated with these sources.)</p> <p>Verify that sources in which organic solvents come into contact with flame or are baked, heat-cured, or heat-polymerized do not emit into the atmosphere organic materials in excess of the following limitations unless discharges are reduced by at least 85 percent overall:</p> <ul style="list-style-type: none"> <li>- 40 lb/day</li> <li>- 8 lb/h.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>AE.125.6.CT.</b> Sources designed for employing or applying highly photochemically reactive solvents must not exceed organic materials emissions limitations (Conn. Agencies Regs. 22a-174-20(f)(2) and (f)(5)).</p>	<p>(NOTE: An 85 percent reduction of total organic materials emissions means an 85 percent reduction of total organic materials when operations are conducted according to good industrial practice.)</p> <p>(NOTE: Limitations apply to sources processing continuous webs, strips, or wires, including cleanup activities associated with these sources.)</p> <p>(NOTE: Organic materials emissions resulting from air or heated drying or products for the first 12 h after their removal from any article, machine, equipment, or other contrivance, except emissions resulting from the sources in which organic solvents come into contact with flame or are baked, heat-cured, or heat-polymerized, are included in determining compliance with emissions limitations.)</p> <p>Verify that sources designed to employ or apply highly photochemically reactive solvents do not emit into the atmosphere organic materials in excess of the following limitations unless discharges are reduced by at least 85 percent overall:</p> <ul style="list-style-type: none"> <li>- 40 lb/day</li> <li>- 8 lb/h.</li> </ul> <p>(NOTE: An 85 percent reduction of highly photochemically reactive solvents means an 85 percent reduction of highly photochemically reactive solvents when operations are conducted according to good industrial practice, utilizing the maximum proportion of highly photochemically reactive solvent appropriate to such good practice. Substitution of nonhighly photochemically reactive solvents is considered 100 percent reduction of the highly photochemically reactive emissions involved.)</p>
<p><b>AE.125.7.CT.</b> Sources designed to apply organic solvents must not exceed organic materials emissions limitations (Conn. Agencies Regs. 22a-174-20(f)(4), (f)(5), and (f)(12)</p>	<p>(NOTE: Limitations apply to sources processing continuous webs, strips, or wires, including cleanup activities associated with these sources.)</p> <p>(NOTE: Organic materials emissions resulting from air or heated drying or products for the first 12 h after their removal from any article, machine, equipment, or other contrivance, except emissions resulting from the sources in which organic solvents come into contact with flame or are baked, heat-cured, or heat-polymerized, are included in determining compliance with emissions limitations.)</p> <p>Verify that sources designed to apply organic solvents do not emit into the atmosphere organic materials in excess of the following limitations unless discharges are reduced by at least 85 percent overall:</p>

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<p><b>AE.125.8.CT.</b> Sources utilizing organic solvents must comply organic materials emissions limitations by specific means (Conn. Agencies Regs. 22a-174-20(f)(6) and (f)(7)).</p> <p><b>Pumps and Compressors</b></p> <p><b>AE.125.9.CT.</b> Pumps and compressors handling VOCs with a vapor pressure of 1.5 psi or greater under actual storage conditions must meet specific requirements (Conn. Agencies Regs. 22a-174-20(d)).</p> <p><b>RACT for VOCs</b></p>	<ul style="list-style-type: none"> <li>- 800 lb/day</li> <li>- 160/h.</li> </ul> <p>(NOTE: An 85 percent reduction of total organic materials emissions means an 85 percent reduction of total organic materials when operations are conducted according to good industrial practice.)</p> <p>Verify that sources utilizing organic solvents, including highly photochemically reactive solvents, comply with organic materials limitations by one of the following means:</p> <ul style="list-style-type: none"> <li>- incineration, as long as 90 percent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide each hour</li> <li>- adsorption, as long as organic emissions are reduced by 90 percent or more each hour</li> <li>- methods demonstrated to have equivalent control efficiencies, approved by the Commissioner.</li> </ul> <p>Verify that incineration is not used to comply with emissions limitations when halogenated hydrocarbons are involved.</p> <p>Verify that equipment used to comply with organic materials emissions limitations are maintained in good working order and are calibrated and operated according to the Commissioner's specifications.</p> <p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that pumps and compressors handling VOCs with a vapor pressure of 1.5 psi under actual storage conditions utilize mechanical seals or other equally effective, Commissioner-approved equipment.</p>

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<p><b>AE.125.10.CT.</b> Sources of VOCs meeting specific criteria must utilize RACT (Conn. Agencies Regs. 22a-174-32(b), (c), (d), and (e)).</p>	<p>(NOTE: RACT requirements apply to sources located on premises or portions of premises with potential VOC emissions in quantities equal to or in excess of the following:</p> <ul style="list-style-type: none"> <li>- 50 tons per calendar year in serious nonattainment areas for ozone</li> <li>- 25 tons per calendar year in severe nonattainment areas for ozone.)</li> </ul> <p>Verify that sources subject to RACT requirements have submitted to the Commissioner RACT compliance plans.</p> <p>Verify that sources comply with Commissioner-approved RACT compliance plans.</p> <p>Verify that sources comply with any orders or permits issued by the Commissioner in lieu of RACT compliance plan requirements.</p>
<p><b>VOC Wastewater Separators</b></p> <p><b>AE.125.11.CT.</b> VOC wastewater separators must control VOC emissions (Conn. Agencies Regs. 22a-174-20(c)).</p>	<p>Verify that single- or multiple-compartment VOC wastewater separators receiving effluent water containing 200 gal/day (760 L/day) or more of any VOC with a vapor pressure of 1.5 psi or more from equipment processing, treating, storing, or handling VOCs are equipped with one or more of the following vapor loss control devices operating in good working order:</p> <ul style="list-style-type: none"> <li>- containers with all openings sealed and totally enclosing the liquid contents</li> <li>- containers equipped with a floating roof, consisting of a pontoon type roof, double deck type roof, or an internal floating cover, resting on the surface of the contents and equipped with closure seals to close the gap between the roof edge and the container wall</li> <li>- containers equipped with vapor recovery systems which collect all VOC vapors discharged from the containers and which process the VOC vapors to reduce their emissions by at least 95 percent by weight</li> <li>- containers have other equipment of equal efficiency, approved by the Commissioner.</li> </ul> <p>Verify that all gauging and sampling devices are vapor-tight except when gauging or sampling occurs.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>AE.130. OPEN BURNING</b></p> <p><b>AE.130.1.CT.</b> Installations/ CW facilities must not engage in open burning without certificates issued by the Commissioner (Conn. Agencies Regs. 22a-174-17).</p>	<p>Verify that installations/CW facilities do not engage in open burning unless they first obtain certificates from the Commissioner to do so.</p> <p>Verify that installations/CW facilities meet the terms and conditions of open burning certificates.</p> <p>(EXEMPTION: Certificates are not required for the following open burning activities:</p> <ul style="list-style-type: none"> <li>- barbecues or other outdoor open fires for the cooking of food for human consumption</li> <li>- campfires, bonfires, and other fires for ceremonial or recreational purposes</li> <li>- fires to abate an immediate fire hazard as long as the abatement fire is supervised by responsible fire officials</li> <li>- fires for training firemen in methods of fighting fires when only liquid fuels are burned</li> <li>- fires in salamanders or other similar devices used by construction or other workers for heating purposes essential to street installation or paving activities, repairing of utilities, or other similar [not defined] work.)</li> </ul> <p>Verify that installations/CW facilities comply with local burning ordinances.</p>

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<p><b>AE.135. VEHICLE EMISSIONS</b></p> <p><b>AE.135.1.CT.</b> Installations/ CW facilities must follow the directives of the Com- missioner when automotive air pollution emergencies are declared (Conn. Agencies Regs. 22a-174-6(h)).</p> <p><b>AE.135.2.CT.</b> Diesel-pow- ered motor vehicles must not exceed visible emissions limitations (Conn. Agencies Regs. 22a-174-18(a)(2)(ii), (a)(3), (a)(4), and (a)(6)).</p>	<p>(NOTE: See category AE.140, Mobile Sources, for requirements that include, but are not limited to, motor vehicles.)</p> <p>Verify that installations/CW facilities follow the directives of the Commissioner when automotive air pollution emergency episodes are declared for the following stages:</p> <ul style="list-style-type: none"> <li>- alert</li> <li>- warning</li> <li>- emergency.</li> </ul> <p>Verify that, whenever one of the following stages is declared, the indicated actions are taken:</p> <ul style="list-style-type: none"> <li>- for alerts, all unessential [not defined] operation of motor vehicles is terminated</li> <li>- for warnings, persons operating motor vehicles reduce operations by the following means: <ul style="list-style-type: none"> <li>- use of car pools</li> <li>- increased use of public transportation</li> <li>- and the elimination of unnecessary operation</li> </ul> </li> <li>- for emergencies, the following: <ul style="list-style-type: none"> <li>- private, noncommercial motor vehicle operations cease, except when absolutely essential for the necessities of life (e.g., medical treatment)</li> <li>- commercial vehicle operations are reduced to the absolute minimum necessary [not defined] to transport necessities and provide for public safety and welfare.</li> </ul> </li> </ul> <p>Verify that diesel-powered motor vehicles do not discharge clearly visible emissions (i.e., emissions of a shade or density equal to or darker than number one on the Ringelmann Chart or 20 percent opacity) for more than 10 consecutive seconds.</p> <p>Verify that diesel-powered motor vehicles never discharge visible emissions of shade or density darker than number 2 on the Ringelmann Chart or 40 percent opacity.</p> <p>(EXEMPTION: Visible emissions limitations do not apply to the following:</p> <ul style="list-style-type: none"> <li>- antique automobiles over 30 yr old</li> <li>- vehicles used exclusively for racing</li> <li>- mobile sources in the process of being repaired</li> <li>- aircraft, locomotives operating on rails, vessels for transportation on water,</li> </ul>



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<p><b>AE.135.3.CT.</b> Motor vehicles of a 1968 and later model year must meet vehicle inspection and maintenance requirements (Conn. Agencies Regs. 22a-174-27(a) and (c) through (g); Connecticut General Statutes, 14-164c(c)).</p>	<p>lawn mowers, snowblowers, and other small home appliances.)</p> <p>(EXEMPTION: When the presence of uncombined water, such as water vapor, is the only reason for sources to violate visible emissions limitations, visible emissions limitations do not apply.)</p> <p>(EXEMPTION: The following are exempt from inspection and maintenance requirements:</p> <ul style="list-style-type: none"> <li>- vehicles with a gross weight of more than 10,000 lb</li> <li>- vehicles powered by electricity</li> <li>- bicycles with motors attached</li> <li>- motorcycles</li> <li>- vehicles operating with a temporary registration</li> <li>- vehicles manufactured before the 1968 model year</li> <li>- new vehicles at the time of initial registration</li> <li>- vehicles registered but not designed primarily for highway use</li> <li>- farm vehicles.)</li> </ul> <p>Verify that, until 31 January 1996, motor vehicles do not exceed the allowable emissions limitations set forth in Part A of Appendix 1-9.</p> <p>Verify that, on and after 1 January 1997, motor vehicles do not exceed the allowable emissions limitations set forth in Part B of Appendix 1-9.</p> <p>(NOTE: Where the GVWR cannot be determined, the emission standard for LDVs apply.)</p> <p>(NOTE: When the vehicle is designated COMPO in the make field of the registration certificate, the emission standards for model year 1968 apply.)</p> <p>(NOTE: Any vehicle with an engine other than one originally installed by the manufacturer or an identical replacement of the engine is subject to the testing requirements for the chassis type and model year of the vehicle.)</p> <p>(NOTE: Any vehicle that is re-engineered from an internal combustion gasoline engine to another combustion or fuel type is subject to the testing requirements for gasoline-powered vehicles.)</p> <p><b>AE.135.4.CT.</b> Model year 1998 and subsequent model year passenger cars and light-duty trucks sold, offered for sale or lease, imported, delivered, purchased, rented,</p>
	<p>(NOTE: The following are not subject to the low emissions requirements:</p> <ul style="list-style-type: none"> <li>- vehicles transferred by inheritance</li> <li>- vehicles transferred by decree of divorce, dissolution, or legal separation entered by a court of competent jurisdiction</li> <li>- vehicles purchased by a nonresident prior to establishing residency in the State of Connecticut</li> </ul>

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<p>acquired, or received in Connecticut must meet low emissions requirements (Conn. Agencies Regs. 22a-174-36(b) through (e)).</p>	<ul style="list-style-type: none"> <li>- vehicles sold for the purpose of being wrecked or dismantled</li> <li>- vehicles sold for registration out of state</li> <li>- vehicles designed exclusively for off-highway use</li> <li>- vehicles which have been certified to standards promulgated in 42 U.S. Code 7521 and which are in the possession of rental agencies in Connecticut and are next rented with a final destination outside of Connecticut</li> <li>- emergency vehicles.)</li> </ul> <p>Verify that model year 1998 and subsequent model year passenger cars and light-duty trucks sold, offered for sale or lease, imported, delivered, purchased, rented, acquired, or received in Connecticut meet the following requirements:</p> <ul style="list-style-type: none"> <li>- comply with emissions standards</li> <li>- are approved by the California Air Resources Board (CARB) for sale in the State of California</li> <li>- have valid emissions control labels.</li> </ul> <p>Verify that model year 1998 and subsequent model year passenger cars and light-duty trucks sold, offered for sale or lease, imported, delivered, purchased, rented, acquired, or received in Connecticut comply with the emissions standards set forth in Part A of Appendix 1-10.</p> <p>Verify that model year 1998 and subsequent model year light-duty transitional low-emission vehicles, low-emission vehicles, and ultra-low-emission vehicles sold, offered for sale or lease, imported, delivered, purchased, rented, acquired, or received in Connecticut comply with the emissions standards set forth in Part B of Appendix 1-10.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<b>AE.140.</b> <b>MOBILE SOURCES</b>	<p>(NOTE: See category AE.135, Vehicle Emissions, for requirements that apply only to motor vehicles.)</p>
<b>AE.140.1.CT.</b> Mobile sources must not exceed visible emissions limitations (Conn. Agencies Regs. 22a-174-18(a)(2)(i), (a)(3), (a)(4), and (a)(6)).	<p>Verify that gasoline-powered mobile sources do not discharge visible emissions for more than five consecutive seconds.</p> <p>(EXEMPTION: Visible emissions limitations do not apply to the following:</p> <ul style="list-style-type: none"> <li>- antique automobiles over 30 yr old</li> <li>- vehicles used exclusively for racing</li> <li>- mobile sources in the process of being repaired</li> <li>- aircraft, locomotives operating on rails, vessels for transportation on water, lawn mowers, snowblowers, and other small home appliances.)</li> </ul> <p>(EXEMPTION: When the presence of uncombined water, such as water vapor, is the only reason for sources to violate visible emissions limitations, visible emissions limitations do not apply.)</p>
<b>AE.140.2.CT.</b> Mobile sources that are stationary or idling must limit operation (Conn. Agencies Regs. 22a-174-18(a)(3), (a)(5), and (a)(6)).	<p>Verify that mobile sources which are stationary or idling do not operate for more than 3 min unless one of the following conditions is met:</p> <ul style="list-style-type: none"> <li>- mobile sources are forced to remain motionless because of traffic conditions or mechanical difficulties</li> <li>- it is necessary to operate heating, cooling, or auxiliary equipment installed on mobile sources when heating, cooling, or auxiliary equipment is necessary to accomplish the intended use of the mobile sources</li> <li>- to bring mobile sources to the manufacturer's recommended operating temperature</li> <li>- the outdoor temperature is below 20 °F</li> <li>- mobile sources are being repaired.</li> </ul> <p>(EXEMPTION: Visible emissions limitations do not apply to aircraft, locomotives operating on rails, vessels for transportation on water, lawn mowers, snowblowers, and other small home appliances.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>AE.145. ASPHALT PAVING MATERIALS/ OPERATIONS</b></p> <p><b>AE.145.1.CT.</b> The storage, use, or application of cutback asphalt must meet specific requirements (Conn. Agencies Regs. 22a-174-20(k)(2)).</p>	<p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that installations/CW facilities do not store, use, or apply cutback asphalt during the months of June, July, August, and September unless less than 5 percent of the total solvent contained in the cutback asphalt evaporates at temperatures up to and including 500 °F.</p> <p>(EXEMPTION: The use of the following is exempt from cutback asphalt requirements:</p> <ul style="list-style-type: none"> <li>- medium-curing cutback asphalt when used solely as a penetrating prime coat for aggregate bases prior to paving</li> <li>- medium-curing cutback asphalt when used for long-period storage or stockpiling of patching mixes used in pavement maintenance</li> <li>- Class 8 bituminous concrete when used at any time for surface treatments under 1 in., for crack filling, relief joints, minor leveling, or pothole patching.)</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>AE.150. ETHYLENE OXIDE SOURCES</b></p> <p><b>AE.150.1.CT.</b> Ethylene sources must not exceed emissions limitations (Conn. Agencies Regs. 22a-174-20(e)(1)).</p>	<p>(NOTE: The Commissioner may approve alternative means of complying with VOC emissions control requirements (Conn. Agencies Regs. 22a-174-20(cc).)</p> <p>Verify that ethylene emissions sources do not discharge emissions unless the waste gas stream is burned at 1300 °F (704 °C) for at least 0.3 s in direct-flame afterburners or equally effective, Commissioner-approved devices.</p> <p>(EXEMPTION: Ethylene emissions limitations do not apply to emergency reliefs and vapor blowdown systems.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>OTHER EMISSIONS/ SOURCES</b></p> <p><b>AE.155. Process Sources</b></p> <p><b>AE.155.1.CT.</b> Process sources must not exceed particulate matter emissions limitations (Conn. Agencies Regs. 22a-174-18-(e)).</p> <p><b>AE.155.2.CT.</b> Process sources other than sulfuric acid plants must not exceed sulfur emissions limitations (Conn. Agencies Regs. 22a-174-19(f)).</p>	<p>Verify that process sources do not exceed the particulate matter emissions limitations set forth in Appendix 1-11.</p> <p>Verify that process sources other than sulfuric acid plants do not emit sulfur oxides in the stack effluent in concentrations exceeding 500 ppm at standard temperatures and pressures.</p>

## Appendix 1-1

### Hazardous Air Pollutants

(Source: Conn. Agencies Regs. 22a-174-29; Tables 29-1 through 29-3)

**Table 1**

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
2-Acetylmino fluorene	53-96-3	---	---	---	---
Acrylonitrile	107-13-1	22	110	0.01	0.05
Aflatoxins	83219-44-7	---	---	---	---
4-Aminodiphenyl	92-67-1	---	---	---	---
Arsenic & compounds (as As)	7440-38-2	0.05	0.25	---	---
Arsenic pentoxide	1303-28-2	---	---	---	---
Arsine	7784-42-1	1	5	0.25ppbv	1.25 ppv
Asbestos <sup>2</sup>	1332-21-4	---	---	---	---
Auramine	2465-27-2	---	---	---	---
Azathioprine	446-86-6	---	---	---	---
Benz(a)pyrene <sup>3</sup>	50-32-8	---	---	---	---
Benzene	71-43-2	150	750	0.05	0.25
Benzidine	92-87-5	---	---	---	---
Beryllium	7440-41-7	0.01	0.05	---	---
Beryllium oxide	1304-56-9	---	---	---	---
Beryllium sulfate	13510-49-1	---	---	---	---
Chlorambucil	305-03-3	---	---	---	---
Chlordane	57-74-9	2.5	12.5	---	---
Chlorinated camphene	8001-35-2	2.5	12.5	---	---
Chlornaphthazine	494-03-1	---	---	---	---
Chlorobenzilate	510-15-4	---	---	---	---
Chloroform	67-66-3	250	1250	0.05	0.25
bis-Chloromethyl ether	542-88-1	0.015	0.075	5.pptv	25.pptv
Chloromethyl methyl ether	107-30-2	---	---	---	---
Chromic acid and chromates (as r)	---	0.25	1.25	---	---
Chromite ore processing (chromate), as Cr	---	0.25	1.25	---	---
Chromium, metal	7440-47-3	2.5	12.5	---	---
Coal tar pitch volatiles	8007-45-2	1	5	---	---
Coke oven emissions	---	---	---	---	---
Cyclophosphamide	50-18-0	---	---	---	---
Dibromochloropropane	96-12-8	0.05	0.25	---	---
3,3'-Dichlorobenzidine	91-94-1	---	---	---	---
1,2-Dichloroethane	107-06-2	20	100	5.ppbv	25.ppbv
Diethylstilboestriol	39011-86-4	---	---	---	---
Diethyl sulfate	64-67-5	---	---	---	---
4-Dimethylaminoazobenzene	60-11-7	---	---	---	---
Dimethyl sulfate	77-78-1	2.5	12.5	0.5 ppbv	2.5 ppbv
Dioxane, technical grade	123-91-1	450	2250	0.125	0.625

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Estrogens	---	---	---	---	---
Ethylene dichloride	107-06-2	20	100	5.ppbv	25.ppbv
Heptachlor	76-44-8	2.5	12.5	---	---
Hexachloroethane	67-72-1	50	250	---	---
Kepone	143-50-0	---	---	---	---
Melphalan	148-82-3	---	---	---	---
4,4'-Methylene bis (2-chloraniline)	101-14-4	0.015	0.075	---	---
MOCA	101-14-4	0.015	0.075	---	---
Morpholine	110-91-8	350	1750	0.1	0.5
Mustard gas	505-60-2	---	---	---	---
Myleran	55-98-1	---	---	---	---
beta-Naphthylamine	91-59-8	---	---	---	---
Nickel carbonyl, as Ni	13463-39-3	1.75	8.75	0.25ppbv	1.25 ppbv
Nickel (metal)	7440-02-0	5	25	---	---
Nickel, soluble compounds (as Ni) <sup>4</sup>	---	0.75	0.375	---	---
Nickel sulfide	12035-72-2	---	---	---	---
Nickel sulfide roasting, fume	---	---	---	---	---
Nickel sulfide roasting, and dust (as Ni)	---	5	25	---	---
4-Nitrodiphenyl	92-93-3	---	---	---	---
Nitrogen mustard	55-86-7	---	---	---	---
n-Nitrosodimethylamine	62-75-9	---	---	---	---
Oxymetholone	434-07-1	---	---	---	---
Perchloroethylene <sup>6</sup>	127-18-4	1700	8500	0.25	1.25
Phenacetin	62-44-2	---	---	---	---
Polynuclear aromatic hydrocarbons (PAH)	50-32-8	0.1 <sup>5</sup>	0.5 <sup>5</sup>	---	---
beta-Propiolactone	57-57-8	7.5	37.5	2.5ppbv	12.5 ppbv
1,1,2,2-Tetrachloroethane	79-34-5	34.4	172	5.ppbv	25.ppbv
Thorium dioxide	1314-20-1	---	---	---	---
o-Toluidine	95-53-4	45	225	0.01	0.5
Toxaphene	8001-35-2	2.5	12.5	---	---
Tresulfan	299-75-2	---	---	---	---
1,1,2-Trichloroethane	79-00-5	225	1125	0.05	0.25
Trichloroethylene	79-01-6	1350	6750	0.25	1.25
2,4,6-Trichlorophenol	88-06-2	---	---	---	---
Vinyl chloride	75-01-4	50	250	0.025	0.125

#### Notes for Table 1

- 1 Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).
- 2 The "HLV" for asbestos (all forms, including amosite, chrysotile, crocidolite, tremolite, and fibrous talc) is 500 fibers, of a length of 5 micrometers or more, per cubic meter (8-h average) and 2500 fibers, of a length of 5 micrometers or more, per cubic meter (30-min average).
- 3 See Polycyclic Aromatic Hydrocarbons.
- 4 Carcinogens.
- 5 Benzene-soluble fraction.



6 Perchloroethylene has been placed in Group 1 provisionally, pending further research by the Department of Health Services and the "Hazardous Air Pollutant Review Panel." Polycyclic Aromatic Hydrocarbons.

(NOTE: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.)

Table 2

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Actinomycin D	1402-38-6	---	---	---	---
Adriomycin	23214-92-8	---	---	---	---
Aldrin	309-00-2	1.5	7.5	---	---
Allyl glycidyl ether	106-92-3	220	1100	0.05	0.25
2-Aminoanthraquinone	117-79-3	---	---	---	---
1-Amino-2-methylantraquinone	82-28-0	---	---	---	---
3-Amino 1,2,4-triazole (amitrole)	61-82-5	---	---	---	---
o-Anisidine	29191-52-4	5	25	1.ppbv	5.ppbv
Antimony trioxide, handling and use (as Sb)	1309-64-4	5	25	---	---
Antimony trioxide production (as Sb)	1309-64-4	5	25	---	---
Aromite	140-57-8	---	---	---	---
Arsenic trioxide production (as As)	1327-53-3	0.25	1.25	---	---
Benz(a)anthracene	56-55-3	---	---	---	---
Benzo(b)fluoranthene	205-99-2	---	---	---	---
Benzotrichloride	98-07-7	---	---	---	---
Brominated biphenyls Butadiene (1,3-butadiene)	106-99-0	22,000	110,000	10	50
n-Butyl glycidyl ether (BGE)	2426-08-6	1350	6750	0.25	1.25
Cadmium	7440-43-9	0.4	2.0	---	---
Cadmium dust & salts (as Cd)	7440-43-9	0.4	2.0	---	---
Cadmium oxide fume (as Cd)	1306-19-0	1.0	5.0	---	---
Cadmium sulfate	10124-36-4	---	---	---	---
Carbon tetrachloride	50-23-5	300	1500	0.05	0.25
Chloramphenicol	56-75-7	---	---	---	---
1-Chloro,2,3-epoxypropane	106-89-8	20	100	6.ppbv	30.ppbv
bis-Chloroethyl nitrosourea (BCNU)	108-60-1	---	---	---	---
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13909-09-6	---	---	---	---
Chrysene	218-01-9	---	---	---	---
Cisplatin	15663-27-1	---	---	---	---
p-Cresidine	120-71-8	---	---	---	---
Cupferron	135-20-6	---	---	---	---
Cycasin	14901-08-7	---	---	---	---
Dacarbazene	4342-03-4	---	---	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
DDT (Dichlorodiphenyl-trichloro-ethane)	50-29-3	5	25	---	---
2,4-Diaminoanisoie sulfate	39156-41-7	---	---	---	---
Dibenz(a,h)anthracene	53-70-3	---	---	---	---
7H-Dibenzo(c,g) carbazole	194-59-2	---	---	---	---
Dibenzo(a,h) pyrene	189-64-0	---	---	---	---
Dibenzo(a,i) pyrene	189-55-9	---	---	---	---
1,2-Dibromoethane	106-93-4	1550	7750	0.2	1
Dienestrol	84-17-3	---	---	---	---
Diepoxybutane	1464-53-5	---	---	---	---
Di-2,3-epoxypropyl ether	2238-07-5	10	50	---	---
Di(2-ethylhexyl) phthalate	117-81-7	50	250	---	---
3-3'-Dimethoxybenzidine	119-90-4	---	---	---	---
4-Dimethylaminobenzene	1300-73-8	100	500	0.21	0.1
3,3'-Dimethylbenzidine	119-93-7	---	---	---	---
Dimethyl carbamoyl chloride	79-44-7	---	---	---	---
1,1-Dimethylhydrazine	57-14-7	10	50	5.ppbv	25.ppbv
3,3'-Dimethyloxybenzidine	119-90-4	---	---	---	---
Dinitrotoluene	121-14-2	15	75	---	---
Direct Black 38	937-37-7	1	---	---	---
Direct Blue 6	2610-05-1	---	---	---	---
Direct Brown 95	10300-74-0	---	---	---	---
Epichlorhydrin	106-89-8	20	100	6.ppbv	30.ppbv
Ethinylestradiol	57-63-6	---	---	---	---
Ethylene dibromide	106-93-4	1550	7750	0.2	1
Ethylene oxide	75-21-8	20	100	0.01	0.05
Ethylene thiourea	96-45-7	---	---	---	---
Formaldehyde	50-00-0	12	60	0.01	0.05
Hexachlorobenzene	118-74-1	---	---	---	---
Hexachlorobutadiene	87-68-3	2.4	12	---	---
Hexamethyl phosphoramidate	680-31-9	---	---	---	---
Hydrazine	302-01-2	1	5	1.ppbv	5.ppbv
Hydrazine sulfate	10034-93-2	---	---	---	---
Hydrazobenzene	122-66-7	---	---	---	---
Indeno(1,2,3-cd) pyrene	193-39-5	---	---	---	---
Iron dextran complex	9004-66-4	---	---	---	---
Isopropyl glycidyl ether (IGE)	4016-14-2	2400	12,000	0.5	2.5
Lead acetate	301-04-2	---	---	---	---
Lead chromate (as Cr)	18454-12-1	0.5	2.5	---	---
Lead phosphate	7446-27-7	---	---	---	---
Lindane	58-89-9	5	25	---	---
Mestranol	72-33-3	---	---	---	---
4,4-Methylene dianiline	101-77-9	8	40	1.ppbv	5.ppbv
4,4'-Methylene bis (n,n-dimethyl)	101-61-1	---	---	---	---
Methyl hydrazine	60-34-4	---	---	---	---
Methyl iodide	74-88-4	100	500	0.02	0.1

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Metronidazole	443-48-1	---	---	---	---
Michler's ketone	90-94-8	---	---	---	---
Mirex	2385-85-5	---	---	---	---
Monomethyl hydrazine	60-34-4	---	---	---	---
Nitrilotriacetic acid	139-13-9	---	---	---	---
5-Nitro-o-anisidine	99-59-2	---	---	---	---
Nitrofen	1836-75-5	---	---	---	---
2-Nitropropane	79-46-9	360	1800	0.1	0.5
Nitrosamines	-----	---	---	---	---
n-Nitrosodi-n-butylamine	924-16-3	---	---	---	---
n-Nitrosodiethanolamine	1116-54-7	---	---	---	---
n-Nitrosodiethylamine	55-18-5	---	---	---	---
n-Nitrosodiphenylamine	86-30-6	---	---	---	---
n-Nitrosodi-n-propylamine	621-64-7	---	---	---	---
n-Nitroso-n-ethylurea	759-73-9	---	---	---	---
n-Nitroso-n-methylurea	684-93-5	---	---	---	---
n-Nitrosomethylvinylamine	4549-40-0	---	---	---	---
n-Nitrosomorpholine	59-89-2	---	---	---	---
n-Nitrosornicotine	16543-55-8	---	---	---	---
n-Nitrosopiperidine	100-75-4	---	---	---	---
n-Nitrosopyrrolidine	930-55-2	---	---	---	---
n-Nitrososarcosine	20661-60-3	---	---	---	---
Norethisterone	68-22-4	---	---	---	---
Oestradiol-17-beta	2529-64-8	---	---	---	---
Oestrone	53-16-7	---	---	---	---
Phenazopyridine	94-78-0	---	---	---	---
Phenazopyridine hydrochloride	136-40-3	---	---	---	---
Phenantoin (and sodium salt)	50-12-4	---	---	---	---
Phenoxyacetic acid herbicides	-----	---	---	---	---
Phenyl glycidyl ether (PGE)	122-60-1	60	300	0.01	0.05
Phenylhydrazine	100-63-0	200	1000	0.05	0.25
Phenyl-2-naphthylamine	135-88-6	---	---	---	---
Phenytoin	57-41-0	---	---	---	---
Polybrominated biphenyls	-----	---	---	---	---
Polychlorinated biphenyls (42% Cl)	53469-21-9	0.01	0.05	---	---
Polychlorinated biphenyls (54% Cl)	11097-69-1	0.01	0.05	---	---
Procarbazine hydrochloride	366-70-1	---	---	---	---
Progesterone	57-83-0	---	---	---	---
Propane sultone	1120-71-4	---	---	---	---
Propylene imine	75-55-8	50	250	0.02	0.1
Propylthiouracil	51-52-5	---	---	---	---
Reserpine	50-55-5	---	---	---	---
Saccharine	81-07-2	---	---	---	---
Safrole	94-59-7	---	---	---	---
Selenium sulfide	7446-34-6	---	---	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Streptozotocin	18883-66-4	---	---	---	---
Sulfallate	95-06-7	---	---	---	---
Tetrachlorinated dibenzo-p-dioxins <sup>2</sup>	1746-01-6	---	---	---	---
Thioacetamide	62-55-5	---	---	---	---
Thiotepa	52-24-4	---	---	---	---
Thiourea	62-56-6	---	---	---	---
o-Tolidine	119-93-7	---	---	---	---
p-Toluidine	106-49-0	90	450	0.02	0.1
o-Toluidine hydrochloride	636-21-5	---	---	---	---
Triaziquone	68-76-8	---	---	---	---
Tris(1-aziridiny) phosphine sulfide	140-56-7	---	---	---	---
Tris (2,3-dibromopropyl) phosphate	126-72-7	---	---	---	---
Uracil mustard	66-75-1	---	---	---	---
Urethane	51-79-6	---	---	---	---
Vinyl bromide	593-60-2	44	220	11.ppbv	55.ppbv
Vinyl cyclohexene dioxide	106-87-6	600	3000	0.1	0.5
Xylidine	1330-73-8	100	500	0.02	0.1
Zinc chromate (as Cr)	13530-65-9	0.5	2.5	---	---

**Notes for Table 2**

- 1 Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).
- 2 The "HLV" for dioxin is 0.7 picograms/m<sup>3</sup> (8-h average). There is no "HLV" in volumetric units. Concentration is expressed in terms of 2,3,7,8 dibenzo-p-dioxin equivalents, as defined in section 22a-174-1. There is an "ambient air quality standard" for this substance contained in section 22a-174-24.

(NOTE: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.)

**Table 3**

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Acetaldehyde	75-07-0	3600	18,000	2	10
Acetic acid	69-19-7	500	2500	0.2	1
Acetic anhydride	108-24-7	400	2000	0.1	0.5
Acetone	67-64-1	11,800	59,000	5	25
Acetone cyanohydrin	75-86-5	---	---	---	---
Acetonitrile	75-05-8	680	3400	0.39	1.95
Acetylene	74-86-2	---	---	---	---
Acetylene dichloride	540-59-0	15,800	79,000	4	20

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Acetylene tetrabromide	79-27-6	280	1400	0.02	0.1
Acetylsalicylic acid	50-78-2	100	500	---	---
Acrolein	107-02-8	5	25	2.ppbv	10.ppbv
Acrylamide	79-06-1	6	30	---	---
Acrylic acid	79-10-7	600	3000	0.2	1
Adiponitrile	111-69-3	360	1800	0.08	0.4
Allyl alcohol	107-18-6	100	500	0.04	0.2
Allyl chloride	107-05-1	60	300	0.02	0.1
Allyl propyl disulfide	2179-59-1	240	1200	0.04	0.2
Aluminum metal and oxide	7429-90-5	200	1000	---	---
Aluminum pyro powder	-----	100	500	---	---
Aluminum welding fumes	-----	100	500	---	---
Aluminum soluble salts	-----	40	200	---	---
Aluminum alkyls (not otherwise classified)	-----	40	200	---	---
2-Aminoethanol	141-43-5	120	600	0.04	0.2
Ammonia	7664-41-7	360	1800	0.5	2.5
Ammonium chloride fumes	12125-02-9	200	1000	---	---
Ammonium sulfamate	7773-06-0	200	1000	---	---
n-Amyl acetate	628-63-7	10,500	52,500	2	10
sec-Amyl acetate	626-38-0	13,000	65,000	2.5	10
Aniline	62-53-3	200	1000	0.04	0.2
p-Anisidine	29191-52-4	10	50	2.ppbv	10.ppbv
Antimony & compounds (as Sb)	-----	10	50	---	---
ANTU (Naphthyl thiourea)	86-88-4	6	30	---	---
Asphalt (petroleum) fumes	8052-42-4	100	500	---	---
Atrazine	1912-24-9	100	500	---	---
Azinphos-methyl	86-50-0	4	20	---	---
Barium (soluble compounds), as Ba	7440-39-3	10	50	---	---
Baygon (propoxur)	114-26-1	10	50	---	---
Benomyl	17804-35-2	200	1000	---	---
Benzal chloride	98-87-3	---	---	---	---
Benzenethiol	108-98-5	40	200	0.01	0.05
Benzo(r,s,t) pentaphene	189-55-9	---	---	---	---
p-Benzoquinone	106-51-4	8	40	2.ppbv	10.ppbv
Benzoyl chloride	98-88-4	---	---	---	---
Benzoyl peroxide	94-36-0	100	500	---	---
Benzyl chloride	100-44-7	100	500	0.02	0.1
Biphenyl	92-52-4	30	150	2.6 ppbv	13.ppbv
Bismuth telluride	1304-82-1	200	1000	---	---
Bismuth telluride, Se-doped	-----	100	500	---	---
Borates, tetra, sodium salts - anhydrous	1303-96-4	20	100	---	---
Borates, tetra, sodium salts - decahydrate	1303-96-4	100	500	---	---
Borates, tetra, sodium salts -	1303-96-4	20	100	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
pentahydrate					
Boron oxide	1303-86-2	200	1000	---	---
Boron tribromide	10294-33-4	200	1000	0.02	0.1
Boron trifluoride	7637-07-2	---	---	---	---
Bromacil	314-40-9	200	1000	0.02	0.1
Bromine	7726-95-6	14	70	2.ppbv	10.ppbv
Bromine pentafluoride	7789-30-2	14	70	2.ppbv	10.ppbv
Bromochloromethane/ chlorobromomethane	74-97-5	21,000	105,000	4	20
Bromoform	75-25-2	100	500	0.01	0.05
Butane	106-97-8	38,000	190,000	16	80
1-Butanethiol	109-79-5	30	150	0.01	0.05
2-Butanethiol	513-53-1	30	150	0.01	0.05
2-Butanone	78-93-3	11,800	59,000	4	20
n-Butyl acetate	123-86-4	14,200	71,000	3	15
sec-Butyl acetate	105-46-4	19,000	95,000	4	20
tert-Butyl acetate	540-88-5	19,000	95,000	4	20
Butyl acrylate	141-32-2	1100	5500	0.2	1
n-Butyl alcohol	71-36-3	6000	30,000	2	10
sec-Butyl alcohol	78-92-2	6100	30,500	2	10
tert-Butyl alcohol	75-65-1	6000	30,000	2	10
Butylamine	109-73-9	---	---	---	---
tert-Butyl chromate (as CrO3)	1189-85-1	---	---	---	---
n-Butyl lactate	138-22-7	500	2500	0.1	0.5
Butyl mercaptan	109-79-5	30	150	0.01	0.05
o-sec-Butylphenol	89-72-5	600	3000	0.1	0.5
p-tert-Butyltoluene	98-51-1	1200	6000	0.2	1
n-Butyronitrile	109-74-0	440	2200	0.16	0.8
Cadmium oxide production	1306-19-0	1	5	---	---
Calcium arsenate (as As)	7778-44-1	---	---	---	---
Calcium cyanamide	156-62-7	10	50	---	---
Calcium hydroxide	1305-62-0	100	500	---	---
Calcium oxide	1305-78-8	40	200	---	---
Camphor, synthetic	76-22-2	240	1200	0.04	0.2
Caprolactam dust	105-60-2	20	100	---	---
Caprolactam vapor	105-60-2	400	2000	0.1	0.5
Captafol (difolatan)	2425-06-1	2	10	---	---
Captan	113-06-2	100	500	---	---
Carbaryl (Sevin)	63-25-2	100	500	---	---
Carbofuran (Furadan)	1563-66-2	2	10	---	---
Carbon black	1333-86-4	70	350	---	---
Carbon disulfide	75-15-0	60	300	0.02	0.1
Carbon tetrabromide	558-13-4	28	140	2.ppbv	10.ppbv
Carbonyl chloride (Phosgene)	75-44-5	8	40	2.ppbv	10.ppbv
Carbonyl fluoride	353-50-4	100	500	0.04	0.2
Catechol	120-80-9	400	2000	0.1	0.5

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Cesium hydroxide	21351-79-1	40	200	---	---
2-Chloraniline	106-47-8	0.06	0.3	0.01 ppbv	0.05 ppbv
Chlorinated diphenyl oxide	55720-99-5	10	50	---	---
Chlorine	7782-50-5	60	300	0.02	0.1
Chlorine dioxide	10049-04-4	6	30	2.ppbv	10.ppbv
Chlorine trifluoride	7790-91-2	---	---	---	---
Chloromadione acetate	302-22-7	---	---	---	---
Chloroacetaldehyde	107-20-0	---	---	---	---
alpha - Chloroacetophenone (Phenacyl chloride)	532-27-4	6	30	1.ppbv	5.ppbv
Chloroacetyl chloride	79-04-0	4	20	1.ppbv	5.ppbv
Chlorobenzene	108-90-7	7000	35,000	1.5	7.5
o-Chlorobenzylidene malonitrile	2698-41-1	8	40	1.ppbv	5.ppbv
Chlorobromomethane/bromo- chloromethane	74-97-5	21,000	105,000	4	20
2-Chloro-1,3-butadiene	126-99-8	900	4500	0.2	1
Chlorodifluoromethane	75-45-6	70,000	350,000	20	100
Chlorodiphenyl (42% Chlorine)	53469-21-9	20	100	---	---
Chlorodiphenyl (54% Chlorine)	11097-69-1	10	50	---	---
2-Chloroethanol	107-07-3	320	1600	0.1	0.5
Chloropentafluoroethane	76-15-3	126,400	632,000	20	100
1-Chloro-1-nitro-propane	600-25-9	200	1000	0.04	0.2
Chloropicrin	76-06-2	14	70	2.ppbv	10.ppbv
beta-Chloroprene	126-99-8	900	4500	0.2	1
o-Chlorostyrene	1331-28-8	5700	28,500	1	5
o-Chlorotoluene	95-49-8	5000	25,000	1	5
Chloropyrifos (Dursban)	2921-88-2	4	20	---	---
Chromium (II) compounds (as Cr)	-----	10	50	---	---
Chromium (III) compounds (as Cr)	-----	10	50	---	---
Chromium (IV) compounds, non- carcinogenic (as Cr)	-----	0.5	2.5	---	---
Chromyl chloride	14977-61-8	3	15	0.5ppbv	2.5ppbv
Clofibrate	637-07-1	---	---	---	---
Clomiprene	911-45-5	---	---	---	---
Clopidol	2971-90-6	200	1000	---	---
Coal dust	-----	40	200	---	---
Cobalt metal, dust & fume (as Co)	7440-48-4	2	10	---	---
Cobalt carbonyl, as Co	00000-00-0	2	10	---	---
Cobalt hydrocarbonyl, (as Co)	16842-03-8	2	10	---	---
Copper - dusts & mists (as Cu)	7440-50-8	20	100	---	---
Copper fume	7440-50-8	2	10	---	---
Cotton dust, raw	-----	4	20	---	---
Crag herbicide	556-22-9	300	1500	---	---
Cresol	1319-77-3	200	1000	0.048	0.24



Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Crotonaldehyde	123-73-9	120	600	0.04	0.2
Cruformate	299-86-5	100	500	---	---
Cumene	98-82-8	4900	24,500	1	5
Cyanamide	420-04-2	40	200	---	---
Cyanides (as CN)	51-50-8	100	500	---	---
	143-33-9	100	500	---	---
Cyanogen	460-19-5	400	2000	0.2	1
Cyanogen chloride	506-77-4	---	---	---	---
Cyclamates	100-88-9	---	---	---	---
Cyclohexane	110-82-7	21,000	105,000	6	30
Cyclohexanethiol	1569-69-3	---	---	---	---
Cyclohexanol	108-93-0	4000	20,000	1	5
Cyclohexanone	108-94-1	2000	10,000	0.5	2.5
Cyclohexene	110-83-8	20,300	101,500	6	30
Cyclohexylamine	108-91-8	800	4000	0.2	1
Cyclonite	121-82-4	30	150	---	---
Cyclopentadiene	542-92-7	4000	20,000	1.5	7.5
Cyclopentane	287-92-3	17,000	85,000	6	30
Cyhexatin	13121-70-5	---	---	---	---
2,4-D (2,4 Dichlorophe-noxyacetic acid)	94-75-7	200	1000	---	---
Dalapon	75-99-0	120	600	0.02	0.1
Dapsone	80-08-0	---	---	---	---
Decaborane	17702-41-9	6	30	1.ppbv	5.ppbv
Decanethiol	143-10-2	---	---	---	---
Demeton	8065-48-3	2	10	0.2 ppbv	1.ppbv
Diacetone alcohol	123-42-2	4800	24,000	1	5
1,2-Diaminoethane	107-15-3	500	2500	0.2	1
Diazinon	333-41-5	2	10	---	---
Diazomethane	334-88-3	8	40	4.ppbv	20.ppbv
Diborane	19287-45-7	2	10	2.ppbv	10.ppbv
Dibrom	300-76-5	60	300	---	---
2-n-Dibutylaminoethanol	102-81-8	280	1400	0.04	0.2
Dibutyl phosphate	107-66-4	100	500	0.02	0.1
Dibutyl phthalate	84-74-2	100	500	---	---
Dichloracetylene	7572-29-4	---	---	---	---
o-Dichlorobenzene	95-50-1	---	---	---	---
p-Dichlorobenzene	106-46-7	9000	45,000	1.5	7.5
Dichlorodifluoromethane	75-71-8	99,000	495,000	20	100
1,3-Dichloro-5,5-dimethyl hydantoin	118-52-5	4	20	---	---
1,1-Dichloroethane	75-34-3	8000	40,000	2	10
1,2-Dichloroethylene	540-59-0	15,000	79,000	4	20
Dichloroethyl ether	111-44-4	600	3000	0.1	0.5
Dichloromethane	75-09-2	7000	35,000	2	10
Dichloromonofluoromethane	75-43-4	800	4000	0.2	1
1,1-Dichloro-1 nitroethane	594-72-9	200	1000	0.04	0.2



Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Dichloropropene	542-75-6	100	500	0.02	0.1
2,2-Dichloropropionic acid	75-99-0	120	600	0.02	0.1
Dichlorotetrafluoroethane	76-14-2	140,000	700,000	20	100
Dichlorvos (DDVP)	62-73-7	20	100	2.ppbv	10.ppbv
Dicrotophos (Bidrin)	141-66-2	5	25	---	---
Dicyclohexyl methane 4,4'- diisocyanate	-----	1.1	5.5	---	---
Dicyclopentadiene	77-73-6	600	3000	0.1	0.5
Dicyclopentadienyl iron	102-54-5	200	1000	---	---
Dieldrin	60-57-1	5	25	---	---
Diethanolamine	111-42-2	300	1500	0.06	0.3
Diethylamine	109-89-7	600	3000	0.2	1
Diethylaminoethanol	100-37-8	1000	5000	0.2	1
Diethyl ether	60-29-7	24,000	120,000	8	40
Diethyl ketone	96-22-0	14,100	70,500	4	20
Diethyl phthalate	84-66-2	100	500	---	---
Diethylene triamine	111-40-0	80	400	0.02	0.1
Diffuorodibromomethane	75-61-6	17,200	86,000	2	10
Diglycidal ether	2238-07-5	10	50	2.ppbv	10.ppbv
Diisobutyl ketone	108-83-8	2800	14,000	0.46	2.3
Diisocyanates, not listed	-----	---	---	0.1 ppbv	0.5 ppbv
Diisopropylamine	108-18-9	400	2000	0.1	0.5
Dimethisterone	79-64-1	---	---	---	---
Dimethoxymethane	109-87-5	62,000	310,000	20	100
Dimethyl acetamide	127-40-3	700	3500	0.2	1
Dimethylamine	124-40-3	360	1800	0.2	1
Dimethylaniline	121-69-7	500	2500	0.1	0.5
Dimethylformamide	68-12-2	600	3000	0.2	1
Dimethylphthalate	131-11-3	100	500	---	---
Dinitolmide	148-01-6	100	500	---	---
Dinitrobenzene - o isomer	528-29-0	20	100	3.ppbv	15.ppbv
Dinitrobenzene - m isomer	99-65-0	20	100	3.ppbv	15.ppbv
Dinitrobenzene - p isomer	100-25-4	20	100	3.ppbv	15.ppbv
Dinitro-o-cresol	534-52-1	4	20	---	---
3,5-Dinitro-o-toluamide (Dinitolmide)	148-01-6	100	500	---	---
Dioxathion (Delnav)	78-34-2	4	20	---	---
Diphenyl	92-52-4	20	100	2.6 ppbv	13.ppbv
Diphenylamine	122-39-4	200	1000	---	---
Diphenylmethane diisocyanate	101-68-8	1	5	---	---
Diphenylphthalate	-----	---	---	---	---
Dipropylene glycol methyl ether	34590-94-8	12,000	60,000	2	10
Dipropyl ketone	123-19-3	4,700	23,500	1	5
Diquat	85-00-7	10	50	---	---
Di-sec octyl phthalate	117-81-7	100	500	---	---
Disulfiram	97-77-8	40	200	---	---
Disulfoton	298-04-4	2	10	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Disyston	298-04-4	2	10	---	---
2,6-Ditert butyl-p-cresol	128-37-0	200	1000	---	---
Diuron	330-54-1	200	1000	---	---
Divinyl benzene	108-57-6	1000	5000	---	---
Dodecanethiol	-----	---	---	---	---
Dyfonate	944-22-9	2	10	---	---
Endosulfan	115-29-7	2	10	---	---
Endrin	72-20-8	2	10	---	---
EPN	2104-64-5	10	50	---	---
Ethane	74-84-0	---	---	---	---
Ethanol	64-17-5	38,000	190,000	20	100
Ethanolamine	141-43-5	120	600	0.04	0.2
Ethion	563-12-2	8	40	---	---
2-Ethoxyethanol	110-80-5	380	1900	0.1	0.5
2-Ethoxyethyl acetate	111-15-9	540	2700	0.1	0.5
Ethyl acetate	141-78-6	28,000	140,000	8	40
Ethyl acrylate	140-88-5	400	2000	0.1	0.5
Ethylamine	75-04-7	360	1800	0.2	1
Ethyl sec-amyl ketone	541-85-5	2600	13,000	0.6	3
Ethyl benzene	100-41-4	8700	43,500	2	10
Ethyl bromide	74-96-4	17,800	89,000	4	20
Ethylbutyl ketone	106-35-4	4600	23,000	1	5
Ethyl chloride	75-00-3	52,000	260,000	20	100
Ethylene	74-85-1	---	---	---	---
Ethylene chlorohydrin	107-07-3	320	1600	0.1	0.5
Ethylenediamine	107-15-3	500	2500	0.2	1
Ethylene glycol dinitrate	628-96-6	6	30	1.ppbv	5.ppbv
Ethylene glycol monomethyl ether acetate	110-49-6	480	2400	0.1	0.5
Ethylene glycol, vapor	107-21-1	---	---	---	---
Ethylenimine	151-56-4	20	100	0.01	0.05
Ethyl ether	60-29-7	24,000	120,000	8	40
Ethyl formate	109-94-4	6000	30,000	2	10
Ethylidene norbornene	16219-75-3	---	---	---	---
Ethyl mercaptan	75-08-1	20	100	0.01	0.05
n-Ethylmorpholine	100-74-3	460	2300	0.1	0.5
Ethyl silicate	78-10-4	1700	8500	0.2	1
Ethynodiol acetate	297-76-7	---	---	---	---
Fenamiphos	22224-92-6	2	10	---	---
Fensulfothion (Dasanit)	115-90-2	2	10	---	---
Fenthion	55-38-9	4	20	---	---
Ferbam	14484-64-1	200	1000	---	---
Ferrovandium dust	12604-58-9	20	100	---	---
Fluorides (as F)	-----	50	250	---	---
Fluorine	7782-41-1	4	20	2.ppbv	10.ppbv
Fluorotrichloromethane	75-69-4	112,000	560,000	20	100

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
5-Fluorouracil	51-21-8	---	---	---	---
Fonofos	944-22-9	2	10	---	---
Formamide	75-12-7	600	3000	0.4	2
Formic acid	64-18-6	180	900	0.1	0.5
Furfural	98-01-1	160	800	0.04	0.2
Furfuryl alcohol	98-00-0	800	4000	0.2	1
Gasoline	8006-61-9	18,000	90,000	6	30
Germanium tetrahydride	7782-65-2	12	60	4.ppbv	20.ppbv
Glass (dust)	-----	100 <sup>2</sup>	500 <sup>2</sup>	---	---
Glass (fibrous) <sup>3</sup>	-----	---	---	---	---
Glutaraldehyde, activated or unactivated	111-30-8	14	70	---	---
Glycerin mist	56-81-5	---	---	---	---
Glycidol	556-52-5	1500	7500	0.5	2.5
Glyconitrile	107-16-4	---	---	---	---
Guthion (Azinphos-Methyl)	86-50-0	4	20	---	---
Hafnium	7440-58-6	10	50	---	---
Hematite	1317-60-8	---	---	---	---
Heptane (n-Heptane)	142-82-5	7000	35,000	1.75	8.75
Heptanethiol	1639-09-4	---	---	---	---
Hexachlorocyclohexane	319-85-7	---	---	---	---
Hexachlorocyclopentadiene	77-47-4	2	10	0.2	1
Hexachloronaphthalene	1335-87-1	4	20	---	---
Hexadecanethiol	-----	---	---	---	---
Hexafluoroacetone	684-16-2	14	70	2.ppbv	10.ppbv
Hexamethylene diisocyanate	822-06-0	0.7	3.5	---	---
Hexane (n-hexane)	110-54-3	3600	18,000	1	5
Hexane, other isomers	110-54-3	36,000	180,000	10	50
Hexanethiol	111-31-9	---	---	---	---
2-Hexanone	591-78-6	400	2000	0.1	0.5
Hexone	108-10-1	4100	20,500	1	5
sec-Hexyl acetate	108-84-9	6000	30,000	1	5
Hexylene glycol	107-41-5	---	---	---	---
Hydralazine	86-54-4	---	---	---	---
Hydrazinobenzene	100-63-0	400	2000	0.1	0.5
Hydrochloride o-anisidine	-----	---	---	---	---
Hydrogenated terphenyls	92-94-4	100	500	0.01	0.05
Hydrogen bromide	10035-10-6	200	1000	0.06	0.3
Hydrogen chloride	7647-01-0	---	---	---	---
Hydrogen cyanide	74-90-8	220	1100	0.2	1
Hydrogen fluoride	7664-39-3	50	250	0.06	0.3
Hydrogen peroxide	7722-84-1	28	140	0.02	0.1
Hydrogen selenide	7783-07-5	4	20	1.ppbv	5.ppbv
Hydrogen sulfide	7783-06-4	280	1400	0.2	1
Hydroquinone	123-31-9	40	200	---	---
17x-Hydroxyprogesterone caproate	-----	---	---	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
2-Hydroxypropyl acrylate	999-61-1	60	300	0.01	0.05
Indene	95-13-6	900	4500	0.2	1
Indium & Compounds (as In)	7440-74-6	2	10	---	---
Iodine	7553-56-2	---	---	---	---
Iodoform	75-47-8	200	1000	0.012	0.06
Iron oxide fume	1309-37-1	100	500	---	---
Iron pentacarbonyl	13463-40-6	16	80	2.ppbv	10.ppbv
Iron salts, soluble (as Fe)	-----	20	100	---	---
Isoamyl acetate	123-92-2	10,500	52,500	2	10
Isoamyl alcohol	123-51-3	7200	36,000	2	10
Isobutyl acetate	110-19-0	14,000	70,000	3	15
Isobutyl alcohol	78-83-1	3000	15,000	1	5
Isobutyronitrile	78-82-0	440	2200	0.16	0.8
Isonicotinic acid hydrazide	55-22-1	---	---	---	---
Isooctyl alcohol	26952-21-6	5400	27,000	1	5
Isophorone	78-59-1	460	2300	0.1	0.5
Isophorone diisocyanate	4098-71-9	0.9	4.5	0.1ppbv	0.5pbv
Isopropoxyethanol	109-59-1	2100	10,500	0.5	2.5
Isopropyl acetate	108-21-4	19,000	95,000	5	25
Isopropyl alcohol	67-63-0	19,600	98,000	8	40
Isopropylamine	75-31-0	240	1200	0.1	0.5
n-Isopropyl aniline	643-28-7	200	1000	0.04	0.2
Isopropyl ether	108-20-3	21,000	105,000	5	25
Isopropyl oils	-----	---	---	---	---
Kerosene	8008-20-6	2000	10,000	---	---
Ketene	463-51-4	18	90	0.01	0.05
Lead, inorg., fumes & dust (as Pb)	7439-92-1	3	15	---	---
Lead arsenate (as Pb)	10102-48-4	3	15	---	---
Liquified petroleum gas	-----	36,000	180,000	20	100
Lithium hydride	7580-67-8	0.5	2.5	---	---
Lyncestrenol	52-76-6	---	---	---	---
Magenta	632-99-5	---	---	---	---
Magnesite	546-93-0	---	---	---	---
Magnesium oxide fume	1309-48-8	200	1000	---	---
Malathion	121-75-5	200	1000	---	---
Maleic anhydride	108-31-6	20	100	5.ppbv	25.ppbv
Malonitrile	109-77-3	160	800	0.06	0.3
Manganese dust & compounds (as Mn)	7489-96-5	---	---	---	---
Manganese cyclopentadienyl tricarbonyl (as Mn)	-----	---	---	---	---
Manganese fume (as Mn)	12079-65-1	2	10	---	---
Manganese tetroxide	7439-96-5	20	100	---	---
Medroxyprogesterone acetate	1317-35-7	20	100	---	---
Megestrol acetate	71-58-9	---	---	---	---
6-Mercaptopurine	595-33-5	---	---	---	---
	50-44-2	---	---	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Mercury (alkyl compounds) (as Hg)	-----	0.2	1	---	---
Mercury, (all forms except alkyl) (as Hg)	-----	---	---	---	---
vapor	-----	1	5	---	---
aryl and inorganic compounds	-----	2	10	---	---
Mesityl oxide	141-79-7	800	4000	0.2	1
Methacrylic acid	79-41-4	1400	7,000	0.4	2
Methanethiol	74-93-1	20	100	0.01	0.05
Methanol	67-56-1	5200	26,000	4	20
Methomyl	16752-77-5	50	250	---	---
Methotrexate	59-05-2	---	---	---	---
Methoxychlor	72-43-5	200	1000	---	---
2-Methoxyethanol	109-86-4	320	1600	0.1	0.5
2-Methoxyethyl acetate	110-49-6	480	2400	0.1	0.5
4-Methoxyphenol	150-76-5	100	500	---	---
Methyl acetate	79-20-9	12,200	61,000	4	20
Methyl acetylene	74-99-7	33,000	165,000	20	100
Methyl acetylene-propadiene mixture	-----	36,000	180,000	20	100
Methyl acrylate	96-33-3	700	3500	0.2	1
Methylacrylonitrile	126-98-7	60	300	0.02	0.1
Methylal	109-87-5	62,000	310,000	20	100
Methylamine	74-89-5	240	1200	0.2	1
Methyl n-amyl ketone	110-43-0	4700	23,500	1	5
n-Methyl aniline	100-61-8	40	200	0.01	0.05
Methyl bromide	74-83-9	1200	6000	0.3	1.5
Methyl butyl ketone	591-78-6	80	400	28.ppbv	0.14
Methyl cellosolve	109-86-4	320	1600	0.1	0.5
Methyl cellosolve acetate	110-49-6	480	1200	0.1	0.5
Methyl chloride	74-87-3	2100	10,500	1	5
Methyl chloroform	71-55-6	38,000	190,000	7	35
Methyl 2-cyanoacrylate	137-05-3	160	800	0.04	0.2
Methylcyclohexane	108-87-2	32,000	160,000	8	40
Methylcyclohexanol	25639-42-3	4700	23,500	1	5
o-Methylcyclohexanone	583-60-8	4600	23,000	1	5
Methylcyclopentadienyl manganese tricarbonyl (as Mn)	12108-13-3	4	20	2.ppbv	10.ppbv
Methyl dometon	8022-00-2	10	50	---	---
Methylene bis (4-cyclo-hexyl-isocyanate)	5124-30-1	---	---	---	---
Methylene chloride	75-09-2	7000	35,000	2	10
Methylene diphenyl isocyanate (MDI)	101-68-8	1	5	---	---
Methyl ethyl ketone (MEK)	78-93-3	11,800	59,000	4	20
Methyl ethyl ketone peroxide	1338-23-4	---	---	---	---
Methyl formate	107-31-3	5000	25,000	2	10

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Methyl isoamyl ketone	110-12-3	4600	23,000	0.96	4.8
Methyl isobutyl carbinol	108-11-2	2000	10,000	0.5	2.5
Methyl isobutyl ketone	108-10-1	4000	20,000	1	5
Methyl isocyanate	624-83-9	1	5	0.4 ppbv	2.ppbv
Methyl isopropyl ketone	563-80-4	14,000	70,500	4	20
Methyl mercaptan	74-93-1	20	100	0.01	0.05
Methyl methacrylate	80-62-6	8200	41,000	2	10
Methyl parathion	298-00-0	4	20	---	---
Methyl n-propyl ketone	107-87-9	10,600	53,000	2.8	14
Methyl silicate	681-84-5	120	600	0.02	0.1
Methyl styrene	98-83-9	4800	24,000	1	5
Metribuzin	21087-64-9	100	500	---	---
Mevinphos	7786-34-7	2	10	2.ppbv	10.ppbv
Mica <sup>4</sup>	-----	---	---	---	---
Mineral wool fiber	-----	200	1000	---	---
Molybdenum (as Mo) soluble compounds	-----	100	500	---	---
Molybdenum (insoluble compounds)	-----	200	1000	---	---
Monocrotophos	6923-22-4	5	20	---	---
Monomethyl aniline	100-61-8	40	200	0.01	0.05
Naled	300-76-5	60	300	---	---
Naphtha <sup>5</sup>	-----	8000	40,000	2	10
Naphthalene	91-20-3	1000	5000	0.2	1
Naphthalene diisocyanate	39394-45-1	0.8	4	---	---
1-Naphthylamine	134-32-7	---	---	---	---
Nickel (II) oxide	1313-99-1	0.3	1.5	---	---
Nickel (III) oxide	1314-06-3	0.3	1.5	---	---
Nickel, other soluble compounds as (Ni) <sup>6</sup>	-----	0.3	1.5	---	---
Nicotine	54-11-5	10	50	---	---
Nitrapyrin	1929-82-4	200	1000	---	---
Nitric acid	7697-37-2	100	500	0.04	0.2
Nitric oxide	10102-43-9	600	3000	0.5	2.5
p-Nitroaniline	100-01-6	60	300	0.01	0.05
Nitrobenzene	98-95-3	100	500	0.02	0.1
p-Nitrochlorobenzene	100-00-5	20	100	---	---
Nitroethane	79-24-3	6200	31,000	2	10
Nitrogen trifluoride	7783-54-2	580	2900	0.2	1
Nitroglycerin	55-63-0	10	50	1.ppbv	5.ppbv
Nitromethane	75-52-5	5000	25,000	2	10
1-Nitropropane	108-03-2	1800	9000	0.5	2.5
Nitrotoluene	99-08-1	220	1100	0.04	0.2
Nitrous oxide	10024-97-2	1340	6700	0.73	3.65
Nonane	111-84-2	21,000	105,000	4	20
Nonanethiol	1455-21-6	---	---	---	---



Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Norethynodrel	68-23-4	---	---	---	---
Norgestrel	6533-00-2	---	---	---	---
Octachloronaphthalene	2234-13-1	2	10	---	---
Octadecanethiol	-----	---	---	---	---
Octane	111-65-9	7000	35,000	1.4	7
Oil mist, mineral	8012-95-1	100	500	---	-----
Osmium tetroxide (as Os)	20816-12-0	0.04	0.2	4.pptv	20.pptv
Oxalic acid	144-62-7	20	100	---	---
Oxygen difluoride	7783-41-7	2	10	1.ppbv	5.ppbv
Paraffin wax fume	8002-74-2	40	200	---	---
Paraquat, respirable sizes	1910-42-5	2	10	---	---
Parathion	56-38-2	2	10	---	---
Pentaborane	19624-22-7	0.2	1	0.1 ppbv	0.5 ppbv
Pentachloronaphthalene	1321-64-8	10	50	---	---
Pentachlorophenol	87-86-5	10	50	---	---
Pentaerythritol	115-77-5	300	1500	---	---
Pentane	109-66-0	7000	35,000	2.3	11.7
Pentanethiol	110-66-7	---	---	---	---
2-Pentanone	107-87-9	10,600	53,000	2.8	14
Perchloromethyl mercaptan	594-42-3	16	80	2.ppbv	10.ppbv
Perchloryl fluoride	7616-94-6	270	1350	0.06	0.3
Perlite	-----	0.6mppcf <sup>7</sup>	3mppcf <sup>7</sup>	---	---
Phenelzine	51-71-8	---	---	---	---
Phenobarbital	50-06-6	---	---	---	---
Phenol	108-95-2	380	1900	0.1	0.5
Phenothiazine	92-84-2	100	500	---	---
Phenylbutazone	50-33-9	---	---	---	---
p-Phenylene diamine	106-50-3	2	10	---	---
Phenyl ether (vapor)	101-84-8	140	700	0.02	0.1
Phenyl ether-Diphenyl mixture (vapor)	-----	140	700	0.02	0.1
Phenyl mercaptan	108-98-5	40	200	0.01	0.05
Phenyl-1-naphthylamine	90-30-2	---	---	---	---
Phenylphosphine	638-21-1	---	---	---	---
Phorate (Thimet)	298-02-2	1	5	---	---
Phosdrin (Mevinphos)	7786-34-7	2	10	2.ppbv	10.ppbv
Phosgene (carbonyl chloride)	75-44-5	8	40	2.ppbv	10.ppbv
Phosphine	7803-51-2	8	40	6.ppbv	30.ppbv
Phosphoric acid	7664-38-2	20	100	---	---
Phosphorus (yellow)	7723-14-0	2	10	---	---
Phosphorus oxychloride	10025-87-3	12	60	2.ppbv	10.ppbv
Phosphorus pentachloride	10026-13-8	20	100	2.ppbv	10.ppbv
Phosphorus pentasulfide	1314-80-3	20	100	---	---
Phosphorus trichloride	7719-12-2	30	150	4.ppbv	20.ppbv
Phthalic anhydride	85-44-9	120	600	0.02	0.1
m-Phthalodinitrile	626-17-5	100	500	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Picloram	1918-02-1	200	1000	---	---
Picric acid	88-89-1	2	10	---	---
Pindone	83-26-1	2	10	---	---
Piperazine dihydrochloride	142-64-3	100	500	---	---
Pival (2-Pivalyl-1,3-indandione)	83-26-1	2	10	---	---
Platinum (metal)	7440-06-4	20	100	---	---
Platinum (soluble salts) (as Pt)	-----	0.4	0.2	---	---
Polytetrafluoroethylene decomposition products	-----	---	---	---	---
Potassium hydroxide	1310-58-3	---	---	---	---
Prednisone	53-03-2	---	---	---	---
Propane	74-98-6	---	---	---	---
Propanethiol	75-33-2	36,000	180,000	---	---
Propargyl alcohol	107-19-7	40	200	0.02	0.1
Propionic acid	79-09-4	600	3000	0.2	1
Propionitrile	107-12-0	280	1400	0.12	0.6
Propoxur	114-26-1	10	50	---	---
n-Propyl acetate	109-60-4	16,800	84,000	4	20
Propyl alcohol	71-23-8	10,000	50,000	4	20
Propylene	115-07-1	---	---	---	---
Propylene dichloride	78-87-5	7000	35,000	1.5	7.5
Propylene glycol dinitrate	6423-43-4	6	30	1.ppbv	5.ppbv
Propylene glycol monomethyl ether	107-98-2	7200	36,000	2	10
Propylene oxide	75-56-9	1000	5000	0.4	2
n-Propyl nitrate	627-13-4	2100	10,500	0.5	2.5
Pyrethrum	8003-34-7	100	500	---	---
Pyridine	110-86-1	300	1500	0.1	0.5
Quinone	106-51-4	8	40	2.ppbv	10.ppbv
RDX	121-82-4	30	150	---	---
Resorcinol	108-46-3	900	4500	0.2	1
Rhodium, Metal fume & dusts (as Rh)	7440-16-6	2	10	---	---
- insoluble compounds	-----	20	100	---	---
- soluble salts (as Rh)	-----	0.02	0.1	---	---
Ronnel	299-84-3	200	1000	---	---
Rosin core solder pyrolysis products (as formaldehyde)	-----	2	10	---	---
Rotenone (commercial)	83-79-4	100	500	2.ppbv	10.ppbv
Rouge	1309-37-1	---	---	---	---
Selenium compounds (as Se)	-----	4	20	---	---
Selenium hexafluoride	7783-79-1	4	20	1.ppbv	5.ppbv
Sesone	136-78-7	200	1000	---	---
Silane	7803-62-5	140	700	0.1	0.5
Silica, amorphous	60676-86-0	---	---	---	---
Silicon carbide	409-21-2	---	---	---	---



Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Silver, metal	7440-22-4	0.2	1	---	---
Silver, soluble compounds	-----	0.2	1	---	---
Soapstone <sup>8</sup>	-----	---	---	---	---
Sodium azide	26628-22-8	---	---	---	---
Sodium bisulfite	7631-90-5	100	500	---	---
Sodium fluoroacetate(1080)	62-74-8	1	5	---	---
Sodium hydroxide	1310-73-2	40	200	---	---
Sodium metabisulfite	7681-57-4	100	---	---	---
Sprionolactone	52-01-7	---	---	---	---
Stibine	7803-52-3	10	50	2.ppbv	10.ppbv
Stoddard solvent	8052-41-3	7000 <sup>9</sup>	35,000 <sup>9</sup>	1.22 <sup>9</sup>	6.1 <sup>9</sup>
Strychnine	57-24-9	3	15	---	---
Styrene, monomer	100-42-5	4300	21,500	1	5
Styrene oxide	96-09-3	---	---	---	---
Subtilisins (proteolytic enzymes as 100% pure crystalline enzyme)	1395-21-7	---	---	---	---
Succinonitrile	110-61-2	400	2000	0.12	0.6
Sulfafurazole	127-69-5	---	---	---	---
Sulfomethoxazole	723-46-6	---	---	---	---
Sulfotep	3689-24-5	4	20	---	---
Sulfur hexafluoride	2551-62-4	120,000	600,000	20	100
Sulfuric acid	7664-93-9	20	100	---	---
Sulfur monochloride	10025-67-9	120	600	0.02	0.1
Sulfur pentafluoride	5714-227	5	25	0.5 ppbv	2.5 ppbv
Sulfur tetrafluoride	7783-60-0	8	40	2.ppbv	10.ppbv
Sulfuryl fluoride	2699-79-8	400	2000	0.1	0.5
Sulprofos	35400-43-2	20	100	---	---
2,4,5-T	93-76-5	200	1000	---	---
Tantalum	7440-25-7	100	500	---	---
TEDP (Sulfotep)	3689-24-5	4	20	---	---
Teflon decomposition products	-----	---	---	---	---
Tellurium & compounds (as Te)	13494-80-9	2	10	---	---
Tellurium hexafluoride (as Te)	7783-80-4	4	20	0.4	2
Temephos	3383-96-8	200	1000	---	---
TEPP	107-49-3	1	5	0.08 ppbv	0.4 ppbv
Terphenyls	92-94-4	---	---	---	---
2,3,7,8-Tetrachlorodi-benzofuran	51207-31-0	---	---	---	---
1,1,1,2-Tetrachloro-2,2-diflu- oroethane	76-11-9	83,400	417,000	10	50
1,1,2,2-Tetrachloro-1,2-diflu- oroethane	76-12-0	83,400	417,000	10	50
Tetrachloronaphthalene	1335-88-2	40	200	---	---
Tetraethyl lead (as Pb)	78-00-2	1.5	7.5	---	---
Tetrahydrofuran	109-99-9	11,800	59,000	4	20
Tetramethyl lead (as Pb)	75-74-1	1.5	7.5	---	---
Tetramethyl succinonitrile	3333-52-6	60	120	0.01	0.05
Tetranitromethane	509-14-8	160	800	0.02	0.1

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
Tetrasodium pyrophosphate	7722-88-5	100	500	---	---
Tetryl (2,4,6-trinitrophenyl-methylnitramine)	479-45-8	30	150	---	---
Thallium, soluble compound (as Tl)	-----	2	10	---	---
4,4'-Thiobis (6-tert butyl-m-cresol)	96-69-5	200	1000	---	---
Thioglycolic acid	68-11-1	100	50.0	0.02	0.1
Thiram	137-26-8	100	500	---	---
Tin, metal	7440-31-5	40	200	---	---
Tin, inorganic compounds, except SnH <sub>4</sub>	-----	40	200	---	---
Tin, organic compounds (as Sn)	-----	2	10	---	---
Tin, oxide (as Sn)	-----	40	200	---	---
Titanium dioxide (as Ti)	13463-67-7	300	1500	---	---
Toluene	108-88-3	7500	37,500	2	10
Toluene-2,4,-diisocyanate (TDI)	584-84-9	0.72	4	0.1 ppbv	0.5 ppbv
Tributyl phosphate	126-73-8	50	250	4.ppbv	20.ppbv
Trichloroacetic acid	76-03-9	100	500	0.02	0.1
1,2,4-Trichlorobenzene	120-82-1	800	4000	0.1	0.5
1,1,1-Trichloroethane	71-55-6	38,000	190,000	7	35
Trichlorofluoromethane	75-69-4	---	---	---	---
Trichloronaphthalene	1321-65-9	100	500	---	---
2,4,5-Trichlorophenol	95-95-4	---	---	---	---
1,2,3-Trichloropropane	96-18-4	6000	30,000	1	5
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	152,000	760,000	20	100
Tricyclohexyltin hydroxide (Cyhexatin)	13121-70-5	100	500	---	---
Triethylamine	121-44-8	800	4000	0.2	1
Trifluoromonobomomethane	75-63-8	122,000	610,000	20	100
Trimellitic anhydride	552-30-7	0.8	4	0.1 ppbv	0.5 ppbv
Trimethylamine	75-50-3	480	2400	0.2	1
Trimethyl benzene	25551-13-7	2500	12,500	0.5	2.5
Trimethyl phosphite	121-45-9	200	1000	0.04	0.2
2,4-6-Trinitrotoluene(TNT)	118-96-7	10	50	---	---
Triorthocresyl phosphate	73-30-8	2	10	---	---
Triphenyl amine	603-34-9	100	500	---	---
Triphenyl phosphate	115-86-6	60	300	---	---
Tungsten & compounds, as W					
- soluble	-----	20	100	---	---
- insoluble	-----	100	500	---	---
Turpentine	8006-64-2	11,200	56,000	2	10
Undecanethiol	-----	---	---	---	---
Uranium (natural) compounds(as U)					
- soluble	-----	1	5	---	---

Hazardous Air Pollutant	CAS Number	Hazard Limiting Value (HLV) (micrograms/m3)		Volumetric Units <sup>1</sup>	
		8-h	30-min	8-h	30-min
- insoluble	-----	4	20	---	---
Valeraldehyde	110-62-3	3500	17,500	1	5
Vanadium, as Pentoxide					
- Dust	1314-62-1	1	5	---	---
- Fume	1314-62-1	1	5	---	---
Vinblastine	865-21-4	---	---	---	---
Vincristine	57-22-7	---	---	---	---
Vinyl acetate	108-05-4	600	3000	0.2	1
Vinylidene chloride	75-35-4	400	2000	0.1	0.5
Vinyl toluene	25013-15-4	9600	48,000	2	10
VM & P Naphtha	8030-30-6	27,000	135,000	6	30
Warfarin	81-81-2	2	10	---	---
Welding fumes(not otherwise classified)	-----	100	500	---	---
o-Xylene	1330-20-7	8680	43,400	2	10
m-Xylene	1330-20-7	8680	43,400	2	10
p-Xylene	1330-20-7	8680	43,400	2	10
m-Xylene, '-diamine	1477-55-0	---	---	---	---
Yttrium	7440-65-5	20	100	---	---
Zinc chloride fume	7646-85-7	20	100	---	---
Zinc oxide fume	1314-13-2	100	500	---	---
Zinc stearate	557-05-1	---	---	---	---
Zirconium compounds (as Zr)	-----	100	500	---	---

#### Notes for Table 3

- 1 Volumetric units are in parts per million by volume, unless shown as parts per billion by volume (ppbv) or parts per trillion by volume (pptv).
- 2 Respirable.
- 3 The "HLV" for fibrous glass is 60,000 fibers of a length of 5 micrometers or greater per cubic meter (8-h) or 300,000 fibers of length of 5 microns or greater per cubic meter (30-min average).
- 4 The "HLV" for mica is 0.4 million particulates per cubic foot (mppcf), 8-h average and 2 mppcf, 30-min average.
- 5 See also VM & P Naphtha.
- 6 Noncarcinogens.
- 7 mppcf: millions of particles per cubic foot.
- 8 The "HLV" for soapstone is 0.4 mppcf, 8-h average and 2 mppcf, 30-min average.
- 9 Petroleum solvents generally, except kerosene.

(NOTE: Dashed lines indicate that no "hazard limiting value" has been established for the "hazardous air pollutant" listed. The "HLV" and/or "AAQS" will be determined at a later date.)

## Appendix 1-2

### Exempt VOCs

(Source: Conn. Agencies Regs. 22a-174-1(97); Table 1(a)-1)

The following VOCs have been designated by the USEPA Administrator as having negligible photochemical reactivity:

1. methane
2. ethane
3. 1,1,1 trichloroethane
4. methylene-chloride (methyl chloroform)
5. dichloromethane
6. trichlorofluoromethane(CFC-11)
7. dichlorodifluoromethane (CFC-12)
8. chlorodifluoromethane (CFC-22)
9. trifluoromethane (CFC-23)
10. 1,1,1-trichloro 2,2,2-trifluoro-ethane (CFC-113)
11. 1,2-dichloro 1,1,2,2-tetrafluoro-ethane (CFC-114)
12. chloropentafluoroethane (CFC-115)
13. 1,1,1,2-tetrafluoroethane (HCFC-134a)
14. 1,1,1-dichloro1-fluoroethane (HCFC-141-b)
15. 1-chloro 1,1-difluoroethane (HCFC-142b)
16. 1,1,2,2-tetrafluoroethane (HFC-134)
17. 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123)
18. 1,1,1-trifluoroethane (HFC-143a)
19. 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124)
20. 1,1-difluoroethane (HFC-152a)
21. Pentafluoroethane (HFC-125)
22. Perfluorocarbon compounds which fall into these classes:
  - a. cyclic, branched, or linear, completely fluorinated alkanes
  - b. cyclic, branched, or linear, completely fluorinated ethers with no unsaturations
  - c. cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations
  - d. sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

## Appendix 1-3

### Ambient Air Quality Standards

(Source: Conn. Agencies Regs. 22a-174-24(b) through (m))

NOTE: All measurements of air quality are corrected to a reference temperature of 20 °C. and to a reference pressure of 760 mm Hg (1013.2 millibars or 29.92 in. Hg).

#### SO<sub>2</sub>

Primary ambient air quality standards for SO<sub>x</sub>, measured as SO<sub>2</sub>:

1. 80 micrograms/m<sup>3</sup> (0.03 ppm), annual arithmetic mean
2. 365 micrograms/m<sup>3</sup> (0.14 ppm), maximum 24-h concentration not to be exceeded more than once per year.

Secondary ambient air quality standard for SO<sub>x</sub>, measured as SO<sub>2</sub>:

1. 1300 micrograms/m<sup>3</sup> (0.5 ppm), maximum 3-h concentration not to be exceeded more than once per year
2. 260 micrograms/m<sup>3</sup> (0.1 ppm), maximum 24-h concentration not to be exceeded more than once per year
3. 1300 micrograms/m<sup>3</sup> (0.5 ppm), maximum 3-h concentration not to be exceeded more than once per year.

#### Particulate Matter

Primary ambient air quality standards for particulate matter:

1. Primary 24-h ambient air quality standard for particulate matter, measured as PM<sub>10</sub>: 150 micrograms/m<sup>3</sup>, 24-h average concentration.

(NOTE: The standard is attained when the expected number of days per calendar year with a 24-h average concentration above 150 micrograms/m<sup>3</sup>, as determined in accordance with Appendix K of 40 CFR 50 revised as of 1 July 1989, is equal to or less than one.)

2. Primary annual standard for particulate matter, measured as PM<sub>10</sub>: 50 micrograms/m<sup>3</sup>, annual arithmetic mean.

(NOTE: The standard is attained when the expected annual arithmetic mean concentration, as determined in accordance with Appendix K of 40 CFR 50 revised as of 1 July 1989, is equal to or less than 50 micrograms/m<sup>3</sup>.)

Secondary ambient air quality standards for particulate matter:

1. Secondary 24-h ambient air quality standard for particulate matter, measured as PM<sub>10</sub>: 150 micrograms/m<sup>3</sup>, 24-h average concentration.

(NOTE: The standard is attained when the expected number of days per calendar year with a 24-h average concentration above 150 micrograms/m<sup>3</sup>, as determined in accordance with Appendix K of 40 CFR 50 revised as of 1 July 1989, is equal to or less than one.)

2. Secondary annual standard for particulate matter, measured as PM<sub>10</sub>: 50 micrograms/m<sup>3</sup>, annual arithmetic mean.

(NOTE: The standard is attained when the expected annual arithmetic mean concentration, as determined in accordance with Appendix K of 40 CFR 50 revised as of 1 July 1989, is equal to or less than 50 micrograms/m<sup>3</sup>.)

#### CO

Primary and secondary ambient air quality standards for CO:

1. 10 mg/m<sup>3</sup> (9 ppm), maximum 8-h concentration not to be exceeded more than once per year
2. 40 mg/m<sup>3</sup> (35 ppm) -- maximum 1-h concentration not to be exceeded more than once per year.

#### **Photochemical Oxidants**

Primary and secondary ambient air quality standard for photochemical oxidants, measured and corrected for interference due to NO<sub>x</sub> and SO<sub>2</sub>: 235 micrograms/m<sup>3</sup> (0.12 ppm), maximum 1-h concentration not to be exceeded more than once per year.

#### **Hydrocarbons**

Primary and secondary ambient air quality standard: 160 micrograms/m<sup>3</sup> (0.24 ppm), maximum 3-h concentration (6 a.m. to 9 a.m.) not to be exceeded more than once per year.

#### **NO<sub>2</sub>**

Primary and secondary ambient air quality standard for nitrogen dioxide: 100 micrograms/m<sup>3</sup> (0.05 ppm), annual arithmetic mean.

#### **Lead**

Primary and secondary ambient air for lead and its compounds, measured as elemental lead: 1.5 micrograms/m<sup>3</sup>, maximum arithmetic mean averaged over three consecutive calendar months.

#### **Dioxin**

Primary ambient air quality standard for dioxin emissions: 1.0 picograms/m<sup>3</sup> annual average.

## Appendix 1-4

### Steps for Air Pollution Reduction during Industrial Air Pollution Emergency Episodes

(Source: Conn. Agencies Regs. 22a-174-6(c))

#### ALERT: Steps for Air Pollution Reduction During Industrial Air Pollution Alerts

1. There is no open burning, except as authorized by the Commissioner in writing to safeguard public health and safety.
2. The use of incinerators for the disposal for any form of solid waste is limited to the hours between 12 noon and 4 p.m.
3. Boiler lancing or soot blowing required for fuel-burning equipment is performed only between the hours of 12 noon and 4 p.m.
4. Fuels having low ash and sulfur content are to be used.
5. Electric power generation is, whenever possible, diverted to facilities outside the alert area.
6. Steam load demands are reduced.
7. Trade waste disposal operations that emit solid particles, gas vapors, or malodorous substances are deferred.
8. Heat load demands for processing are reduced.

#### WARNING: Steps for Air Pollution Reduction During Industrial Air Pollution Warnings

1. There is no open burning except as authorized by the Commissioner in writing to safeguard public health and safety.
2. The use of incinerators for the disposal of any form of solid waste or liquid waste is prohibited.
3. Boiler lancing or soot blowing required for fuel-burning equipment is performed only between the hours of 12 noon and 4 p.m.
4. All unessential operation of motor vehicles is terminated.
5. Electric power generation is, to the maximum extent possible, diverted to facilities outside the warning area.
6. Steam load demands shall be reduced the maximum extent possible.
7. Trade waste disposal operations which emit solid particles, gas vapors, or malodorous substances are deferred.
8. Heat load demands for processing are reduced the maximum extent possible.

#### EMERGENCY: Steps for Air Pollution Reduction During Industrial Air Pollution Emergencies

1. There is no open burning, except as authorized by the Commissioner in writing to safeguard public health and safety.
2. The use of incinerators for the disposal of any form of solid or liquid waste is prohibited.
3. All enterprises and activities described below immediately cease operations:
  - a. mining and quarrying
  - b. all construction work except that essential to secure sites against endangering life and limb
  - c. all retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food
  - d. banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges, and services; offices of insurance carriers, agents and brokers, real estate offices.

## Appendix 1-5

### Odor Limit Values

(Source: Conn. Agencies Regs. 22a-174-23; Table 23-1)

Compound	Concentration (ppm/15-min average)
Chlorine	0.0240
Ethyl acrylate	0.00037
Ethyl mercaptan	0.00040
Formaldehyde	2.49
Hydrogen sulfide	0.0045
Methyl ethyl ketone	17.0
Methyl mercaptan	0.0010
Methyl methacrylate	0.34
Perchloroethylene	71.0
Phenol	0.12
Styrene	0.15
Toluene	11.0



## Appendix 1-6

### Stationary Sources and Modifications Subject to Permitting Requirements

(Source: Conn. Agencies Regs. 22a-174-3)

#### Part A: Construction Permits

Owners/operators of proposed stationary sources meeting one of the following criteria must apply for permits prior to the construction of the proposed stationary sources.

- Equipment used in processes involving surface coating including, but not limited to, the following:
  1. printing
  2. spray or dip painting
  3. roller coating
  4. electrostatic depositing
  5. spray cleaning.
- Equipment used in solvent metal cleaning, etching, or plating processes as well as other processes involving metal cleaning and/or surface preparation which are connected to ventilation systems controlling the escape of air pollutants or contaminants into the workroom when one of the following conditions is met:
  1. for wet systems, the total capacity of equipment is 1000 gal or more
  2. for dry systems, the potential emissions to the ambient air from the dry system equipment are greater than 5 tons/yr
  3. for any solvent degreasing units, the total liquid capacity is 1000 gal or more.
- Other equipment in which the combined weight of all materials introduced (excluding air and water) is 2000 lb or more in any 1 h or 16,000 lb or more in any 1 day.
- Liquid storage tanks, reservoirs, or containers with a capacity of 40,000 gal or more used for the storage of acids, VOCs with a vapor pressure of 1.5 psia or greater under actual storage conditions, inks coolants, lacquers, enamels, varnishes, or liquid resins.
- Fuel-burning equipment using liquid fuel in which the maximum heat input guaranteed by the manufacturer of such equipment is 5 MBtu/h or more.
- Fuel-burning equipment using gaseous fuel in which the maximum heat input guaranteed by the manufacturer of such equipment is 11 MBtu/h or more.
- Fuel-burning equipment burning solid fuels, or fuel-burning equipment burning fuel oils with a specific gravity in API degrees of 30 or less, unless the maximum heat input guaranteed by the manufacturer of such equipment is less than 1 MBtu/h.
- Stationary sources used as incinerators except afterburners used for the disposal of waste gases from a source which has a permit or order from the Commissioner requiring the afterburner.
- All industrial flares for the disposal of liquids or gases.
- Any stripping facilities with potential emissions in excess of the following:
  1. for pollutants listed in Table 1 of Appendix 1-1, 0.1 total pounds per hour of all pollutants
  2. for pollutants listed in Table 2 of Appendix 1-1, 0.2 total pounds per hour of all pollutants
  3. for pollutants listed in Table 3 of Appendix 1-1, 0.4 total pounds per hour of all pollutants.

- Any new stationary sources or modifications including any processes, operations, equipment, or activities with potential emissions of any particular air pollutant are greater than 5 tons/yr or with maximum uncontrolled emissions of any individual air pollutant are greater than 100 tons/yr, except any stationary sources which the Commissioner determines to be physically incapable of operating at a rate which would exceed these limits.
- New stationary sources or modifications subject to sections of 40 CFR 60 or 61, as from time to time amended, which the Commissioner has been delegated authority to enforce.
- Stationary sources meeting either of the following criteria:
  1. stationary sources subject to construction permit requirements on or after 1 June 1972 for which owners/operators failed to apply for and receive valid permits at the time of construction or modification
  2. stationary sources subject to operating permit requirements.

#### Part B: More on Construction Permits

Owners/operators of proposed stationary sources meeting one of the following criteria must apply for and obtain permits prior to the construction of the proposed stationary sources.

- Sources that have potential emissions of any individual air pollutant equal to or greater than 15 tons/yr.
- Sources that are major stationary sources.
- Sources that are major modifications to major stationary sources.
- Sources that are subject to sections of 40 CFR 60 or 61 which the Commissioner has been delegated authority to enforce.

#### Part C: Operating Permits

Owners/operators of stationary sources meeting one of the following criteria must obtain permits prior to the operation of the stationary sources.

- Sources that have potential emissions of any individual air pollutant equal to or greater than 5 tons/yr.
- Sources that have maximum uncontrolled emissions of any individual air pollutant equal to or greater than 100 tons/yr.
- Sources that are subject to construction permit requirements.
- Sources that fail to demonstrate continued compliance with the conditions of operation which formed the basis of permit exemptions when failures cause potential emissions of any individual air pollutant equal to or greater than 5 tons/yr.
- Sources that are incinerators.
- Sources that are stripping facilities with potential emissions in excess of the following, unless BACT, as determined by the Commissioner, is utilized as part of a state order or permit to remediate soil or groundwater contamination:
  1. for pollutants listed in Table 1 of Appendix 1-1, 0.1 total pounds per hour of all pollutants
  2. for pollutants listed in Table 2 of Appendix 1-1, 0.2 total pounds per hour of all pollutants
  3. for pollutants listed in Table 3 of Appendix 1-1, 0.4 total pounds per hour of all pollutants.

- Sources that are subject to construction permit requirements in effect prior to 1 July 1979, the construction of which commenced prior to 1 June 1972, but which did not begin operation prior to 1 October 1972.

## Appendix 1-7

### NO<sub>x</sub> Emissions from Fuel-Burning Equipment (Source: Conn. Agencies Regs. 22a-174-22(e) and (f); Table 22-2)

#### Part A: Emissions Limitations

Source	Type of Fuel Fired			
	Gas-Fired	Residual Oil-Fired	Other Oil-Fired	Coal-Fired
Turbine engine with 100 MBtu/h or greater MRC	55 ppmvd	n/a	75 ppmvd	n/a
Turbine engine with less than 100 Mbtu/h MRC	0.90 lb/MBtu	n/a	0.90 lb/MBtu	n/a
Cyclone furnace	0.43 lb/MBtu	0.43 lb/MBtu	0.43 lb/MBtu	0.43 lb/MBtu
Fast-response double-furnace Naval boiler	0.20 lb/MBtu	0.30 lb/MBtu	0.30 lb/MBtu	0.30 lb/MBtu
Fluidized-bed combustor	n/a	n/a	n/a	0.29 lb/MBtu
Other boiler	0.20 lb/MBtu	0.25 lb/MBtu	0.20 lb/MBtu	0.38 lb/MBtu
Reciprocating engine	2.5 g/bk hp-h	n/a	8 g/bk hp-h	n/a

1. The following limitations apply to sources not covered by the preceding table.
  - a. For fuel-burning equipment fired by a fuel other than those set forth in the preceding table, the following NO<sub>x</sub> emissions limitation applies: 0.3 lb/MBtu of heat input.
  - b. For waste combustors subject to Paragraph 2 of Part A of this appendix, the following NO<sub>x</sub> emissions limitation applies: 0.38 lb/MBtu of heat input.
  - c. For waste combustors not subject to Paragraph 2 of Part A of this appendix, but have waterwall furnaces, the following NO<sub>x</sub> emissions limitation applies: 0.38 lb/MBtu of heat input.
  - d. For waste combustors not subject to Paragraph 2 of Part A of this appendix that do not have waterwall furnaces, the following NO<sub>x</sub> emissions limitation applies: 0.33 lb/MBtu of heat input.
  - e. For glass-melting furnaces, the following NO<sub>x</sub> emissions limitation applies: 5.5 lb of NO<sub>x</sub> per ton of glass produced.
  - f. For sources, other than glass-melting furnaces, that burn fuel for heating materials, the following NO<sub>x</sub> emissions limitation applies: 180 ppmvd, corrected to 12 percent CO<sub>2</sub>.
  - g. For sources not covered by the preceding table nor by Paragraph 1.a through 1.f of this appendix, the following NO<sub>x</sub> emissions limitation applies: 700 ppmvd.
2. Waste combustors meeting specific criteria must comply with additional requirements.
  - a. Waste combustors that burn refuse-derived fuel must install and operate selective noncatalytic reduction or other NO<sub>x</sub> emissions control technology capable of reducing the NO<sub>x</sub> emission rate by at least 30 percent from the average emission rate in the calendar year 1990 on one boiler unit at the facility.  
(NOTE: If the Commissioner determines that operations during 1990 were not representative of normal operations of the facility, the Commissioner may require the use of another calendar year that is more representative.)
  - b. Actual annual average NO<sub>x</sub> emissions from other boiler units at the facility must not exceed the following limit: 420 tons/yr.  
(NOTE: The Commissioner may consider any emission reduction below 0.38 lb/MBtu of heat input to be eligible as surplus emissions reductions for the purposes of emission reduction credits until 31 May 1999.)

#### Part B: Multi-Fuel Sources

1. Sources that are capable of firing two or more fuels are subject to one of the following NO<sub>x</sub> emissions limitations:

- a. for fuel-burning equipment that simultaneously fires two or more different fuels, an emissions limitation calculated by use of the following steps:
  - i. multiplying the heat input of each fuel combusted by the emissions limitation established in Part A of this appendix for the type of fuel
  - ii. summing the products
  - iii. dividing the sum by the total heat input
- b. for fuel-burning equipment that is capable of interchangeably firing two or more fuels, the emissions specified in the table in Part A of this appendix
- c. for fuel-burning equipment operated exclusively on oil or gas from 1 May through 30 September, the emissions limitation of the following:
  - i. 0.2 lb/MBtu of heat input from 1 May through 30 September
  - ii. 0.29 lb/MBtu for the remainder of the year.

2. For fuel-burning equipment that converts fuel, the following NO<sub>x</sub> emissions limitations apply:

- a. when sources burn coal to provide more than 50 percent of their total heat input during the last full calendar year immediately prior to the fuel conversion, the following emissions limitation applies: 0.29 lb/MBtu of heat input
- b. when sources burn residual oil to provide more than 50 percent of their total heat input during the last full calendar year immediately prior to the fuel conversion, the following emissions limitation applies: 0.225 lb/MBtu of heat input.

## Appendix 1-8

### Classification of Solvents

(Source: Conn. Agencies Regs. 22a-174-20(i))

1. The following solvents are considered highly photochemically reactive:
  - a. Group R1: Any hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones, having an olefinic or cycloolefinic type of unsaturation.
  - b. Group R2: Any aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene, phenyl acetate, and methyl benzoate.
  - c. Group R3: Any ketones having branched hydrocarbon structures, and ethylbenzene, trichloroethylene, and toluene.
2. Any solvent mixture is considered highly photochemically reactive if the composition of the mixture exceeds any of the following limits by volume:
  - a. 5 percent of any combination of chemical compounds in group R1
  - b. 8 percent of any combination of chemical compounds in group R2
  - c. 20 percent of any combination of chemical compounds in group R3
  - d. 20 percent of any combination of chemical compounds in groups R1, R2, and R3.
3. Whenever any organic solvent or any constituent of any organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it is considered a member of the most reactive chemical group, that is, the group having the least allowable percent of the total volume of solvents.
4. Any solvent not classified in paragraph 1 of this Appendix and any solvent mixture that does not exceed any of the limits in paragraph 2 of this Appendix are considered nonhighly photochemically reactive.

## Appendix 1-9

### Emissions Standards for Periodic Motor Vehicle Inspection and Maintenance

(Source: Conn. Agencies Regs. 22a-174-27(a) and (c) through (m))

(NOTE: Connecticut regulations mix metric units of measurement with standard units of measurement (e.g., grams and miles in the abbreviation g/mi.)

#### Part A: Allowable Emissions Limitations Until 31 January 1996

- For vehicles of model years 1968 through 1996, inclusive, the maximum allowable emissions for any idle exhaust emissions test are as follows:

Vehicle Model Year	CO (Volume %)	THC (ppm)
1968-69	5.00	500
1970	4.75	475
1971	4.40	450
1972	4.25	425
1973	4.00	390
1974	3.80	350
1975	3.00	300
1976	2.80	300
1977	2.70	300
1978	2.40	275
1979	2.10	250
1980	2.00	225
1981	1.20	200
1982	1.20	200
1983	1.00	175
1984	1.00	150
1985	1.00	150
1986	1.00	150
1987	1.00	150
1988-96	1.00	125

- For vehicles of model years 1981 through 1996, the maximum allowable emissions for any transient exhaust emissions test are as follows:

LDV			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-82	2.00	60.0	3.00
1983-90	2.00	30.0	3.00
1991-95	1.20	20.0	2.50
1996 and later	0.80	15.0	2.00

LDT Less than 6000 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)

LDT Less than 6000 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981 - 83	7.50	100.0	7.00
1984 - 87	3.20	80.0	7.00
1988 - 90	3.20	80.0	3.50
1991 - 95	2.40	60.0	3.00
1996 and later			
< = 3750 lvw	0.80	15.0	2.00
> 3750 lvw	1.00	20.0	2.50

LDT 6000 to 8500 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-83	7.50	100.0	7.00
1984-87	3.20	80.0	7.00
1988-90	3.20	80.0	5.00
1991-95	2.40	60.0	4.00
1996 and later	2.40	60.0	4.00

LDT 8501 to 10,000 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-84	6.00	100.0	8.00
1985-86	5.00	75.0	8.00
1987-90	3.00	60.0	6.00
1991-97	3.00	60.0	6.00

- Evaporative system functional test standards are:
  1. Evaporative system integrity (pressure) test. For vehicles of model years 1971 through 1996 an evaporative system pressure of at least 8 in. of water must maintained for 2 min following system pressurization to 14.0 +/- 0.5 in. of water.
  2. Evaporative canister transient purge test. For vehicles of model years 1981 through 1996, a total purge system flow of at least 1 L must be observed over the course of the transient test.
- Maximum allowable visible emissions for diesel-powered LDVs and LDTs of model years 1968 and later are 20 percent particulate opacity as determined by any opacity meter.

**Part B: Allowable Emissions Limitations on and After 1 January 1997**

- For vehicles of model years 1968 through 1980, inclusive, the maximum allowable emissions for any idle exhaust emissions test are as follows:

Vehicle Model Year	CO (Volume %)	THC (ppm)
1968-69	5.0	500
1970	4.75	475
1971	4.4	450
1972	4.25	425
1973	4.0	390



Vehicle Model Year	CO (Volume %)	THC (ppm)
1974	3.8	350
1975	3.0	300
1976	2.8	300
1977	2.7	300
1978	2.4	275
1979	2.1	250
1980	2.0	225

- For vehicles of model years 1968 through 1980, inclusive, the maximum allowable emissions for any transient exhaust emissions test are as follows:

LDV			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-82	0.80	30.0	2.00
1983-95	0.80	15.0	2.00
1996 and later	0.60	10.0	1.00

LDT Less than 6000 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981 - 83	3.40	70.0	4.50
1984 - 87	1.60	40.0	4.50
1988 - 95	1.60	40.0	2.50
1996 and later			
< = 3750 lvw	0.60	10.0	1.50
> 3750 lvw	1.00	13.0	1.80

LDT 6000 to 8500 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-83	3.40	70.0	4.50
1984-87	1.60	40.0	4.50
1988-95	1.60	40.0	3.50
1996 and later	0.80	15.0	2.00

LDT 8501 to 10,000 lb GVWR			
Vehicle Model Year	THC (g/mi)	CO (g/mi)	NOx (g/mi)
1981-84	5.00	75.0	6.00
1985-86	3.00	50.0	6.00
1987-90	2.00	40.0	6.00
1991-97	2.00	40.0	5.00
1998 and later	2.00	30.0	4.00

- Evaporative system functional test standards are:

1. Evaporative system integrity (pressure) test. For vehicles of model years 1971 and later, an evaporative system pressure of at least 8 in. of water must be maintained for 2 min following system pressurization to 14.0 +/- 0.5 in. of water.
  2. Evaporative canister transient purge test. For vehicles of model years 1981 and later, a total purge system flow of at least 1 L must be observed over the course of the transient test.
- Maximum allowable visible emissions for diesel powered LDVs and LDTs of model years 1968 and later are 20 percent particulate opacity as determined by any opacity meter.

## Appendix 1-10

### Standards for Low-Emission Vehicles

(Source: Conn. Agencies Regs. 22a-174-36(b) through (e); Tables 36-1 and 36-2)

(NOTE: Connecticut regulations do indeed mix metric units of measurement with standard units of measurement (e.g., grams and miles in the abbreviation g/mi).)

#### Part A: 1998 and Subsequent Model-Year Passenger Car and Light-Duty Truck Exhaust Emissions Standards

Vehicle Type	Loaded Vehicle Weight (lb)	Durability Vehicle Basis (mi)	Nonmethane Hydrocarbons (g/mi) <sup>1</sup>	CO (g/mi)	NO <sub>x</sub> (g/mi) <sup>2</sup>
PC	All	50,000	0.25	3.4	0.4
PC	All	100,000	0.31	4.2	0.6
Diesel PC (Option 2)	All	100,000	0.31	4.2	1.0
LDT	0-3750	50,000	0.25	3.4	0.4
LDT	0-3750	100,000	0.31	4.2	0.6 <sup>6</sup>
Diesel LDT (Option 2)	0-3750	100,000	0.31	4.2	1.0
LDT	3751-5750	50,000	0.32	4.4	0.7
LDT	3751-5750	100,000	0.40	5.5	0.97 <sup>6</sup>
Diesel LDT (Option 1)	3751-5750	100,000	0.40	5.5	1.5

#### Notes for Part A:

- 1 For methanol- or ethanol-fueled vehicles certifying to these standards, including fuel-flexible vehicles when certifying on methanol or ethanol, "Nonmethane Hydrocarbons" means "Organic Material Nonmethane Hydrocarbon Equivalent" (or "OMNMHCE").
- 2 The maximum projected emissions of NO<sub>x</sub> measured on the federal Highway Fuel Economy Test (HWFET; 40 CFR 600, Subpart B) must not be greater than 1.33 times the applicable passenger car standards and 2.00 times the applicable light-duty truck standards shown in the table. Both the projected emissions and the HWFET standard must be rounded in accordance with ASTM E29-67 to the nearest 0.1 g/mi before being compared.
- 3 Diesel passenger cars and light-duty trucks certifying to these standards, are subject to a particulate exhaust emission standard of 0.08 g/mi, determined on a 50,000-mi durability vehicle basis.
- 4 For all vehicles, except those certifying to optional diesel standards, in-use compliance with the exhaust emission standards shall be limited to vehicles with less than 75,000 mi.
- 5 All passenger cars, and light-duty trucks, except those diesel vehicles certifying to optional standards, are subject to nonmethane hydrocarbon, CO, and NO<sub>x</sub> standards determined on a 50,000-mi durability basis and nonmethane hydrocarbon and CO standards determined on an 100,000-mi durability basis.
- 6 100,000-mi NO<sub>x</sub> standards are applicable for 1998, and subsequent model-year vehicles.

#### Part B: Exhaust Emissions Standards for Transitional Low-Emission Vehicles, Low-Emission Vehicles, and Ultra-Low Emission Vehicles in Passenger Car and Light-Duty Truck Vehicles

Vehicle Type	Loaded Vehicle Weight (lb)	Durability Vehicle Basis (mi)	Emissions Category <sup>1</sup>	Nonmethane Organic Gases (g/mi) <sup>2,3</sup>	CO	NO <sub>x</sub> <sup>4</sup>
PC and LDT	All	50,000	TLEV	0.125	3.4	0.4
	0-3750	50,000	LEV	0.075 (0.100)	3.4 (3.4)	0.2 (0.3)
			ULEV	0.040 (0.058)	1.7 (2.6)	0.2 (0.3)

Vehicle Type	Loaded Vehicle Weight (lb)	Durability Vehicle Basis (mi)	Emissions Category <sup>1</sup>	Nonmethane Organic Gases (g/mi) <sup>2,3</sup>	CO	NO <sub>x</sub> <sup>4</sup>
LDT	3751-5750	100,000	TLEV	0.156	4.2	0.6
			LEV	0.090	4.2	0.3
			ULEV	0.055	2.1	0.3
		50,000	TLEV	0.160	4.4	0.7
			LEV	0.100 (0.128)	4.4 (4.4)	0.4 (0.5)
			ULEV	0.050 (0.075)	2.2 (3.3)	0.4 (0.5)
		100,000	TLEV	0.200	5.5	0.9
			LEV	0.130	5.5	0.5
			ULEV	0.070	2.8	0.5

Notes for Part B:

1. TLEV means transitional low-emission vehicle. LEV means low-emission vehicle. ULEV means ultra-low-emissions vehicles.
2. Nonmethane Organic Gases (or NMOG) means the total mass of oxygenated and nonoxygenated hydrocarbon emissions.
3. Fuel-flexible and dual-fuel PCs and LDTs from 0 to 5750 lb LVW must be certified to exhaust mass emission standards for NMOG established for the operation of the vehicle on any available fuel other than gasoline, and gasoline.
4. The maximum projected emissions of NO<sub>x</sub> measured on the federal Highway Fuel Economy Test (HWFET; 40 CFR 600, Subpart B) must not be greater than 1.33 times the applicable light-duty vehicle standards shown in the table. Both the projected emissions and the HWFET standard shall be rounded in accordance with ASTM E29-67 to the nearest 0.1 g/mi before being compared.
5. The standards in parentheses are intermediate in-use compliance standards for 50,000 mi. For PCs and LDTs from 0 to 5760 lb. LVW, including fuel-flexible and dual-fuel vehicles when operating on any available fuel other than gasoline, intermediate in-use compliance standards apply to LEVs and ULEVs for the 1998 model-year. In-use compliance with standards beyond 50,000 mi is waived for the 1998 model year for LEVs and ULEVs.
6. In-use compliance testing is limited to vehicles with fewer than 75,000 mi.
7. Deterioration factors for hybrid electric vehicles must be based on the emissions and mileage accumulation of the auxiliary power unit. For certification purposes only, Type A hybrid electric vehicles shall demonstrate compliance with 50,000-mi emission standards (using 50,000-mi deterioration factors), and demonstrating compliance with 100,000-mi emission standards are required. For certification purposes only, Type B hybrid electric vehicles shall demonstrate compliance with 50,000-mi emission standards (using 50,000-mi deterioration factors) and 100,000-mi emission standards (using 75,000-mi deterioration factors). For certification purposes only, Type C hybrid vehicles shall demonstrate compliance with 50,000-mi emission standards (using 50,000-mi deterioration factors) and 100,000-mi emission standards (using 100,000-mi deterioration factors).

## Appendix 1-11

### Particulate Emissions Limitations for Process Sources (Source: Conn. Agencies Regs. 22a-174-18(d); Table 3-1)

Process Weight Rate (lb/h)	Emission Rate (lb/h)
50	0.36
100	0.55
500	1.53
1000	2.25
5000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

Interpolation of the data in this table for the process weight rates up to 60,000 lb/h are accomplished by the use of the equation:  $E = 3.59 P^{0.62}$  P equal to or less than 30 tons/h.

Interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/h are accomplished by the use of the equation:  $E = 17.31 P^{0.16}$  P greater than 30 tons/h.

Where: E = emissions in pounds per hour and P = process weight rate in tons per hour.

#### Notes:

- For the purposes of these requirements, process weight per hour is the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not.
- For a cyclical or batch operation, the process weight per hour is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle.
- For a continuous operation, the process weight per hour is derived by dividing the process weight for a typical period of time by the length of that period of time.
- When the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of these requirements, the interpretation that results in the minimum value for allowable emission applies.

- For purposes of these requirements, the total process weight from all similar process units at a plant or premises is used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.
- For the purposes of these requirements, when any material undergoes a series of operations which are capable of emitting particulate matter and which employ any combination of machines, equipment, or other devices used for processing the material either continuously or in batches, the total process weight for the series of operations is the weight of materials introduced to the series as a whole. Any material which is the product of any operation in the series is not to be counted as part of the process weight for any other operation in the series.

## SECTION 2

### CULTURAL RESOURCES MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for Cultural Resources Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Altered* - changed, modified, rebuilt, removed, demolished, restored, razed, moved, or reconstructed (Connecticut General Statutes Section 7-147p (Conn. Gen. Stat. 7-147p)).
- *Ancient Burial Place* - any tract of land within any municipality which has been used or has been in existence as a burial ground for more than 100 yr (Conn. Gen. Stat. 19a-315).
- *Archaeological Artifact* - material evidence that is not less than 50 yr old of past life and culture in the state that is found in connection with an archaeological site (Conn. Gen. Stat. 10-381).
- *Archaeological Investigation* - any subsurface tests or excavations or other activity resulting in the destruction or removal of artifacts or data from an archaeological site (Conn. Gen. Stat. 10-381).
- *Archaeological Site* - a location where there exists material evidence that is not less than 50 yr old of the past life and culture of human beings in the state (Conn. Gen. Stat. 10-381).
- *Building* - a combination of materials forming a shelter for persons, animals, or property (Conn. Gen. Stat. 7-147p).
- *Burial Ground Authority* - the town, ecclesiastical society, or cemetery association, as the case may be (Conn. Gen. Stat. 19a-315).
- *Erected* - constructed, built, installed, or enlarged (Conn. Gen. Stat. 7-147p).
- *Exterior Architectural Features* - such portion of the exterior of a structure or building as is open to view from a public street, way, or place (Conn. Gen. Stat. 7-147p).
- *Grave Marker* - any of the following when used to mark graves in an ancient burial place, cemetery, or burial ground: tomb, monuments, gravestones or fragments thereof and fences or curbing which enclose individual or family burial plots (Conn. Gen. Stat. 19a-315).
- *Historic Property* - any individual building, structure, object, or site that is significant in the history, architecture, archaeology, and culture of the state, its political subdivisions, or the nation and the real property used in connection therewith (Conn. Gen. Stat. 7-147p).
- *Native American* - people who occupied Connecticut prior to European settlement and their historic descendants, Indians who are residents of this state and all members of other tribes recognized by the United States or by Canada or its Provinces who are residents of this state (Conn. Gen. Stat. 10-381).
- *Sacred Site or Sacred Land* - any space, including an archaeological site, of ritual or traditional significance in the culture and religion of Native Americans that is listed or eligible for listing on the National Register of

Historic Places (16 U.S. Code (USC) 740a, as amended) or the state register of historic places, including, but not limited to, marked and unmarked human burials, burial areas and cemeteries, monumental geological or natural features with sacred meaning or a meaning central to a group's oral traditions; sites of ceremonial structures, including sweat lodges; rock art sites, and sites of great historical significance to a tribe native to this state (Conn. Gen. Stat. 10-381).

- *Structure* - any combination of materials, other than a building, which is affixed to the land, and shall include, but not be limited to, signs, fences, and walls (Conn. Gen. Stat. 7-147p).



<b>CULTURAL RESOURCES MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS</b>		
	<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
Historic Properties	CR.5.1.CT.	2-4
Archaeological/Indian Sites	CR.15.1.CT. through CR.15.4.CT.	2-5

**COMPLIANCE CATEGORY:  
CULTURAL RESOURCES MANAGEMENT  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>CR.5. HISTORIC PROPERTIES</b></p> <p><b>CR.5.1.CT.</b> Installations/CW facilities must meet specific requirements prior to any activity within the boundaries of an historic property (Conn. Gen. Stat. 7-147s).</p>	<p>Determine if the installation/CW facility conducts any activities within the boundaries of an historic district or historic property.</p> <p>Verify that the installation/CW facility obtains approval prior to any activity, erection of a building or structure, alteration of an exterior architectural feature, demolition, or removal of a building or structure within the boundaries of an historic property.</p>

**COMPLIANCE CATEGORY:**  
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Connecticut Supplement

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p><b>CR.15. ARCHAEOLOGICAL/ INDIAN SITES</b></p> <p><b>CR.15.1.CT.</b> No person may conduct any activity which would endanger the archaeological integrity or sacred importance of a state archaeological preserve without a permit (Conn. Gen. Stat. 10-385 and 10-386).</p> <p><b>CR.15.2.CT.</b> Installations/ CW facilities must report human burials or human skeletal remains that are being or about to be disturbed, destroyed, defaced, removed, or exposed (Conn. Gen. Stat. 10-388).</p> <p><b>CR.15.3.CT.</b> Construction or agricultural, archaeological, or other activities which might alter, destroy, or otherwise impair the integrity of a human burial or skeletal remains must be immediately ceased (Conn. Gen. Stat. 10-388).</p> <p><b>CR.15.4.CT.</b> Grave markers must not be destroyed, injured, or removed (Conn. Gen. Stat. 19a-315b).</p>	<p>Verify that no person conducts any archaeological investigation, initiates construction or demolition activities, or undertakes any other activity which would endanger the archaeological integrity or sacred importance of a state archaeological preserve without a permit.</p> <p>Verify that anyone who knows or reasonably believes that any human burial or human skeletal remains are being or about to be disturbed, destroyed, defaced, removed, or exposed immediately notifies the chief medical examiner and state archaeologist.</p> <p>Verify that, if human burials or human skeletal remains are encountered during construction or agricultural, archaeological, or other activities which might alter, destroy, or otherwise impair the integrity of the burials or remains, the activity is ceased and does not resume until authorized by the chief medical examiner and state archaeologist.</p> <p>Verify that grave markers within any cemetery or burial place are not destroyed or injured.</p> <p>Verify that grave markers are not removed unless removed for reproduction, preservation, or display in an accredited museum, and both of the following steps have been taken:</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
	<ul style="list-style-type: none"><li>- one of the following has been acquired:<ul style="list-style-type: none"><li>- consent of the owner of the burial plot or a lineal descendent of the deceased</li><li>- if owner or lineal descendent is unknown or does not respond within 30 days to a request, consent of the burial ground authority</li></ul></li><li>- an order of the probate court for the district has been obtained.</li></ul>

## SECTION 3

### HAZARDOUS MATERIALS MANAGEMENT

Connecticut Supplement, October 1997

This section covers the state requirements for Hazardous Materials Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Standards Adopted by Reference

The following standards promulgated by the National Fire Protection Association (NFPA) are adopted by reference (Regulations of Connecticut State Agencies (Conn. Agencies Regs.) 29-320-3, 29-320-3a(a), and 29-331-4). When any standard adopted references within its text a standard that is contrary to the State Fire Code, the standard referenced in the State Fire Code takes precedence:

1. NFPA 30-1996, Flammable and Combustible Liquids Code;
2. NFPA 30A-1996, Automotive and Marine Service Station Code, except as amended, altered or deleted and by the addition of certain provisions as indicated in Section 29-320-11a of this code;
3. NFPA 30B-1994, Code for the Manufacture and Storage of Aerosol Products;
4. NFPA 34-1995, Standard for Dipping and Coating Processes Using Flammable and Combustible Liquids;
5. NFPA 35-1995, Standard for the Manufacture of Organic Coatings;
6. NFPA 37-1994, Standard for Installation and Use of Stationary Combustion Engines and Gas Turbines;
7. NFPA 52-1992, Standard for Compressed Natural Gas (CNG) Vehicular Systems, except as amended, altered or deleted and by the addition of certain provisions as indicated in Section 29-329-4 of this code;
8. NFPA 54-1996, National Fuel Gas Code;
9. NFPA 57-1996, Standard for Liquefied Natural Gas Vehicle Fuel Systems;
10. NFPA 58-1995, Standard for the Storage and Handling of Liquefied Petroleum Gases, except as amended, altered, or deleted and by the addition of certain provisions as indicated in Section 29-331-5 of this code;
11. NFPA 327-1993, Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers;
12. NFPA 385-1990, Standard for Tank Vehicles for Flammable and Combustible Liquid;
13. NFPA 395-1993, Standard for the Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects;
14. NFPA 407-1996, Standard for Aircraft Fuel Servicing;
15. NFPA 415-1992, Standard for Aircraft Fueling Ramp Drainage.

The following parts of the Code of Federal Regulations (CFR) are also adopted by reference:

1. CFR 107 B and 171 through 178 inclusive, as amended.
2. CFR 388 and 390 through 397 entitled, *Federal Motor Safety Regulations*, inclusive as amended.

#### Definitions:

- *Commissioner* - Connecticut Commissioner of Public Safety (Conn. Agencies Regs. 29-320-2a) [Added October 1997].
- *Fuel Gases* - includes natural gas, manufactured gas, liquefied petroleum in the vapor phase only, liquefied petroleum gas-air mixtures, and mixtures of these gases, plus gas-air mixtures within the flammable range with the fuel gas or the flammable component of a mixture being a commercially distributed product (Conn. Agencies Regs. 29-329-1) [Added October 1997].

<b>HAZARDOUS MATERIALS MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS</b>										
<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>									
<p>(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)</p> <table><tr><td>Flammable/Combustible Liquids</td><td></td><td></td></tr><tr><td>    General</td><td>HM.35.1.CT.</td><td>3-3</td></tr><tr><td>Hazardous Materials Transportation</td><td>HM.50.1.CT.</td><td>3-4</td></tr></table>		Flammable/Combustible Liquids			General	HM.35.1.CT.	3-3	Hazardous Materials Transportation	HM.50.1.CT.	3-4
Flammable/Combustible Liquids										
General	HM.35.1.CT.	3-3								
Hazardous Materials Transportation	HM.50.1.CT.	3-4								

**COMPLIANCE CATEGORY:**  
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>FLAMMABLE/ COMBUSTIBLE LIQUIDS</b></p> <p><b>HM.35 General</b></p> <p><b>HM.35.1.CT.</b> Diesel motor vehicle fuel liquids must be dispensed from tank vehicles to motor vehicles in accordance with specific requirements (Conn. Agencies Regs. 29-320-4a) [Added October 1997].</p>	<p>Verify that the dispensing of diesel motor fuel liquids in the open from a tank vehicle to a motor vehicle meets all of the following requirements:</p> <ul style="list-style-type: none"> <li>- the Commissioner has inspected the premises and operations and given approval</li> <li>- the tank vehicle complies with the requirements of NFPA 385 <i>Standard for Tank Vehicles for Flammable and Combustible Liquids</i></li> <li>- the dispensing hose does not exceed 50 ft in length</li> <li>- the dispensing nozzle is a listed automatic-closing type without a latchopen device</li> <li>- nighttime deliveries are made in adequately lighted areas</li> <li>- the tank vehicle flasher lights are in operation while dispensing</li> <li>- fuel expansion space is left in each fuel tank to prevent overflow in the event of temperature increase</li> <li>- written emergency procedures in the event of a spill or fire are conspicuously posted at the dispensing area.</li> </ul>

**COMPLIANCE CATEGORY:  
HAZARDOUS MATERIALS MANAGEMENT  
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>HM.50. HAZARDOUS MATERIALS TRANSPORTATION</b></p> <p><b>HM.50.1.CT.</b> Operators of vehicles involved in intrastate transportation of hazardous materials must be 18 yr old (Conn. Agencies Regs. 29-337-3a).</p>	<p>Verify that operators of vehicles involved in intrastate transportation of hazardous materials are 18 yr old.</p> <p>(NOTE: The Federal requirement for operators of vehicles involved in interstate transportation of hazardous materials is 21 yr.)</p>



## SECTION 4

### HAZARDOUS WASTE MANAGEMENT

Connecticut Supplement, October 1997

This section covers the state requirements for Hazardous Waste Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

Spills or releases of hazardous waste must be reported to the Commissioner using the 24-h Emergency Spill Response telephone number at (203) 566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company.

Appendix 4-1 lists portions of Federal regulations incorporated by reference, including Federal regulations modified by Connecticut regulations.

#### Definitions

- *Commissioner* - the Commissioner of Environmental Protection of the State of Connecticut, or her designee (Title 22a Regulations of Connecticut State Agencies 449(c) Section 22a-449(c)-100(c) (Conn. Agencies Regs. 22a-449(c)-100(c)).
- *Day* - calendar day, unless otherwise specified (Conn. Agencies Regs. 22a-449(c)-100(c)).
- *Department (DEP)* - the Connecticut Department of Environmental Protection (Conn. Agencies Regs. 22a-449(c)-100(c)).
- *Manifest* - the shipping document USEPA form 8700-22, originated and signed by the generator in accordance with the instructions included in the Appendix to 40 CFR 262 (Conn. Agencies Regs. 22a-449(c)-100(c)).
- *Small Quantity Generator (SQG)* - a generator who generates more than 100 kg [~221 lb] but less than 1000 kg [~2205 lb] of hazardous waste in a calendar month, provided that such waste does not include more than either of the following: (Conn. Agencies Regs. 22a-449(c)-102(c))
  1. a total of 1 kg [~2.2 lb] of acute hazardous wastes listed in 40 CFR 261.31, 262.32, or 261.33(e)
  2. a total of 100 kg [~221 lb] of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste listed in 40 CFR sections 261.31, 261.32, or 261.33(e), provided there is not more than a total of 1 kg [~2.2 lb] of acute hazardous waste contained in that residue, soil, waste, or debris.(NOTE: SQGs are also limited to a total of 1000 kg onsite accumulation of hazardous waste [compared to 6000 kg in the Federal regulations], along with the 180/270-day accumulation time limit.)

HAZARDOUS WASTE MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS																																			
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<p>(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;">State-Specific Hazardous Waste Requirements</td> <td style="width: 35%;">HW.5.1.CT. and HW.5.2.CT.</td> <td style="width: 30%; text-align: right;">4-3</td> </tr> <tr> <td>Conditionally Exempt Small Quantity Generators (CESQG)</td> <td>HW.15.1.CT.</td> <td style="text-align: right;">4-5</td> </tr> <tr> <td>Small Quantity Generators (SQG)</td> <td></td> <td></td> </tr> <tr> <td>    General</td> <td>HW.20.1.CT. through HW.20.3.CT.</td> <td style="text-align: right;">4-6</td> </tr> <tr> <td>    Containers</td> <td>HW.30.1.CT.</td> <td style="text-align: right;">4-7</td> </tr> <tr> <td>    Container Storage Areas</td> <td>HW.40.1.CT. through HW.40.3.CT.</td> <td style="text-align: right;">4-8</td> </tr> <tr> <td>Generators</td> <td></td> <td></td> </tr> <tr> <td>    General</td> <td>HW.55.1.CT.</td> <td style="text-align: right;">4-10</td> </tr> <tr> <td>Transportation of Hazardous Waste</td> <td>HW.100.1.CT. through HW.100.6.CT.</td> <td style="text-align: right;">4-11</td> </tr> <tr> <td>All TSDFs</td> <td></td> <td></td> </tr> <tr> <td>    General</td> <td>HW.105.1.CT.</td> <td style="text-align: right;">4-13</td> </tr> </table>			State-Specific Hazardous Waste Requirements	HW.5.1.CT. and HW.5.2.CT.	4-3	Conditionally Exempt Small Quantity Generators (CESQG)	HW.15.1.CT.	4-5	Small Quantity Generators (SQG)			General	HW.20.1.CT. through HW.20.3.CT.	4-6	Containers	HW.30.1.CT.	4-7	Container Storage Areas	HW.40.1.CT. through HW.40.3.CT.	4-8	Generators			General	HW.55.1.CT.	4-10	Transportation of Hazardous Waste	HW.100.1.CT. through HW.100.6.CT.	4-11	All TSDFs			General	HW.105.1.CT.	4-13
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GUIDANCE FOR APPENDIX USERS		
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:	REFER TO PAGE NUMBERS:
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**COMPLIANCE CATEGORY:  
HAZARDOUS WASTE MANAGEMENT  
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>HW.5. STATE-SPECIFIC HAZARDOUS WASTE REQUIREMENTS</b></p> <p><b>HW.5.1.CT.</b> Scrap metals which meet the characteristic of ignitability or reactivity must comply with specific requirements as hazardous wastes (Conn. Agencies Regs. 22a-449(c)-101(c)).</p> <p><b>HW.5.2.CT.</b> Lead-acid batteries reclaimed for recycling are subject to specific requirements (Conn. Agencies Regs. 22a-449(c)-106(c)).</p>	<p>Verify that all containers and tanks holding these materials are marked so that their contents are clearly identified and the date upon which each period of accumulation begins is clearly marked and visible for inspection.</p> <p>Verify that installations/CW facilities recycling these materials are registered with the Commissioner and submit an annual report in accordance with 40 CFR 264.75 and 265.75.</p> <p>(NOTE: The Federal requirement is for a biennial submission of this report; the state requirement is for an annual submission. The contents requirement is the same as the Federal. See HW.145 in the TEAM Guide for details.)</p> <p>(NOTE: The following recycling activities do not require registration or reporting:</p> <ul style="list-style-type: none"> <li>- recycling equipment that is an essential part of an industrial production process of the facility that generates the recyclable materials</li> <li>- recycling equipment on the site of a CESQG which is used solely by the CESQG to recycle its waste.)</li> </ul> <p>Verify that spent batteries are not opened, handled or stored in a manner which may rupture the battery case, cause it to leak, or produce short circuits.</p> <p>Verify that spent batteries are not stored near incompatible materials unless they are protected from the other materials by means of a dike, berm, wall, or other device to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials;</p> <p>Verify that spent batteries are stored on an impervious surface and inspected weekly for leaks and deterioration.</p> <p>Verify that no installation/CW facility accumulates greater than 20,000 kg of spent batteries at any one time unless they have submitted to the Commissioner a completed spent battery accumulation registration.</p> <p>(NOTE: Installation/CW facilities that generate, transport, store or collect spent lead-acid batteries other than for recycling are subject to the requirements for</p>

<b>COMPLIANCE CATEGORY:</b> <b>HAZARDOUS WASTE MANAGEMENT</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
	hazardous waste.)

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>HW.15. CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS (CESQG)</b></p> <p><b>HW.15.1.CT.</b> CESQGs must meet specific operating requirements (Conn. Agencies Regs. 22a-449(c)-101(b)).</p>	<p>Verify that CESQGs do not offer their hazardous waste to a transporter who does not have a USEPA identification number and a current transporter permit.</p> <p>Verify that the CESQG keeps records of any test results, waste analyses, or other determinations made for at least 3 yr from the date that the waste was last sent to onsite or offsite treatment, storage, or disposal.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SMALL QUANTITY GENERATORS (SQG)</b></p> <p><b>HW.20. General</b></p> <p><b>HW.20.1.CT.</b> SQGs may accumulate up to 1000 kg of hazardous waste onsite without being subject to TSDF requirements (Conn. Agencies Regs. 22a-449(a)-102(a)(2)(I)).</p> <p><b>HW.20.2.CT.</b> SQGs must file a biennial report (Conn. Agencies Regs. 22a-449(a)-102(a)(2)(I)).</p> <p><b>HW.20.3.CT.</b> SQGs must meet specific manifest requirements (Conn. Agencies Regs. 22a-449(c)-102(b)(3)).</p>	<p>Verify that SQGs do not accumulate more than 1000 kg of hazardous waste onsite at any time.</p> <p>(NOTE: The Federal requirements allow SQGs to accumulate up to 6000 kg onsite.)</p> <p>Verify that the biennial report (USEPA Form 8700-13A) is complete and was submitted in a timely manner.</p> <p>Verify that copies are kept for 3 yr.</p> <p>(NOTE: This is the same as the Federal requirement for TSDFs and Large Quantity Generators (LQGs): the form is much simpler for SQGs.)</p> <p>Verify that any SQG located in Connecticut who manifests a shipment to a destination within or outside of Connecticut meets the following requirements:</p> <ul style="list-style-type: none"> <li>- the manifest consists of at least the number of copies designated by the Commissioner</li> <li>- the manifest copies, when properly completed, are sent to those persons specified in 40 CFR 262.22 and any additional people specified by the Commissioner</li> <li>- all copies of the manifest are legibly completed</li> <li>- a copy of the manifest is sent to the Commissioner within 7 days of the date on which the transporter accepts and signs the manifest</li> <li>- if the designation or instruction to the transporter referred to in 40 CFR 262.20(d) is made orally, it is followed by a written communication to the transporter and the Commissioner within 3 days, giving the same instructions.</li> </ul>

**COMPLIANCE CATEGORY:  
HAZARDOUS WASTE MANAGEMENT  
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SMALL QUANTITY GENERATORS (SQG)</b></p> <p><b>HW.30. Containers</b></p> <p><b>HW.30.1.CT.</b> Containers of hazardous waste must be marked according to specific requirements (Conn. Agencies Regs. 22a-449(c)-102(a)(2)(E)).</p>	<p>Verify that containers of hazardous waste are labeled <b>HAZARDOUS WASTE</b> and with other words that identify the contents of the containers.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SMALL QUANTITY GENERATORS (SQG)</b></p> <p><b>HW.40. Container Storage Areas</b></p> <p><b>HW.40.1.CT.</b> Containers at SQGs must be inspected (Conn. Agencies Regs. 22a-449(c)-102(b)(2)).</p> <p><b>HW.40.2.CT.</b> Container storage areas at SQGs must have a containment system (Conn. Agencies Regs. 22a-449(c)-102(a)(2)(B)).</p>	<p>(NOTE: The State of Connecticut has adopted several Federal regulations for LQGs and/or TSDFs and made them applicable to SQGs.)</p> <p>Verify that areas where containers are stored are inspected at least weekly for deterioration or corrosion.</p> <p>Verify that all containers are stacked in such a manner that each container identification label can be read.</p> <p>Verify that inspection records are maintained for at least 3 yr from the date of inspection.</p> <p>Verify that hazardous waste containers holding wastes that do not contain free liquids have a containment system that meets one of the following requirements:</p> <ul style="list-style-type: none"> <li>- the storage area is sloped or otherwise designed and operated to drain and remove liquid resulting from precipitation</li> <li>- the containers are elevated or are otherwise protected from contact with accumulated liquid.</li> </ul> <p>Verify that containers holding hazardous wastes containing free liquids are stored in areas that meet the following requirements:</p> <ul style="list-style-type: none"> <li>- the base underlying the containers is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation</li> <li>- the base is sloped or the containment system is otherwise designed and operated to drain and remove liquids unless the containers are elevated to prevent contact with any accumulated liquids</li> <li>- the containment has sufficient capacity to contain 10 percent of the volume of the containers or the volume of the largest container, whichever is larger</li> <li>- run-on into the containment system is prevented unless the collection system has sufficient excess capacity to contain any run-on that may enter the system</li> <li>- spilled or leaked waste and accumulated precipitation is removed from the sump or collection area in a timely manner to prevent overflow</li> <li>- if collected material is a hazardous waste, it is managed as a hazardous waste.</li> </ul>



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**HW.40.3.CT.** Containers holding ignitable or reactive wastes must be at least 15 m from the property line (Conn. Agencies Regs. 22a-449(c)-102(a)(2)(D)).

(NOTE: Storage areas that store containers holding hazardous wastes F020, F021, F022, F023, F026, and F027 must meet all of the requirements listed above even when the wastes do not contain free liquids.)

Verify that containers holding ignitable or reactive wastes are located at least 15 m (50 ft) from the property line.

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>GENERATORS</b></p> <p><b>HW.55. General</b></p> <p><b>HW.55.1.CT.</b> Generators must meet specific manifest requirements (Conn. Agencies Regs. 22a-449(c)-102(b)(3)).</p>	<p>Verify that any generator located outside of Connecticut who manifests a shipment to Connecticut and, except as provided in 40 CFR 262.21, any generator located in Connecticut who manifests a shipment to a destination within or outside of Connecticut uses meets the following requirements:</p> <ul style="list-style-type: none"> <li>- the manifest consists of at least the number of copies designated by the Commissioner</li> <li>- the manifest copies, when properly completed, are sent to those persons specified in 40 CFR 262.22 and any additional people specified by the Commissioner</li> <li>- all copies of the manifest are legibly completed</li> <li>- a copy of the manifest is sent to the Commissioner within 7 days of the date on which the transporter accepts and signs the manifest</li> <li>- if the designation or instruction to the transporter referred to in 40 CFR 262.20(d) is made orally, it is followed by a written communication to the transporter and the Commissioner within 3 days, giving the same instructions.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>HW.100. TRANSPORTATION OF HAZARDOUS WASTE</b></p> <p><b>HW.100.1.CT.</b> The transportation of hazardous wastes in or through the State of Connecticut requires a permit (Conn. Agencies Regs. 22a-449(c)-11).</p> <p><b>HW.100.2.CT.</b> Generators must not offer their hazardous waste to a transporter without a permit from the State of Connecticut (Conn. Agencies Regs. 22a-449(c)-102(b)).</p> <p><b>HW.100.3.CT.</b> Transporters must meet specific storage requirements (Conn. Agencies Regs. 22a(c)-103(b)).</p> <p><b>HW.100.4.CT.</b> Transporters' vehicles must meet specific requirements (Conn. Agencies Regs. 22a-449(c)-103(c)).</p> <p><b>HW.100.5.CT.</b> Transporters</p>	<p>(NOTE: A transporter permit is not required for a generator of hazardous waste who transports via equipment owned by the generator a total of less than 1000 kg of waste in a calendar month to an off-site waste TSDF within the State of Connecticut, provided the waste TSDF either has a permit from the Commissioner or is operating under interim status.)</p> <p>Verify that the transporter has a permit to move hazardous waste in or through Connecticut.</p> <p>Verify that permits are not transferred without the approval of the Commissioner.</p> <p>Verify that the generator does not offer its waste to a transporter without a current state transporter permit.</p> <p>Verify that the transporter does not store hazardous waste in or on a vehicle, trailer, or other means of conveyance which is not in transit to the designated TSDF for longer than 72 h without written approval from the Commissioner.</p> <p>(NOTE: Federal regulations allow transporters to store hazardous waste in DOT containers at transfer facilities for 10 days without meeting TSDF requirements.)</p> <p>Verify that the vehicles display the number of the permit issued by the Commissioner on the sides and rear of the tank, or waste-carrying portion of the vehicle.</p> <p>Verify that the numbers are in letters and numbers the color of which contrasts with the background and are at least 10 cm.</p> <p>Verify that all personnel engaged in handling or transport of hazardous wastes</p>

<p align="center"><b>COMPLIANCE CATEGORY:</b>  <b>HAZARDOUS WASTE MANAGEMENT</b>  <b>Connecticut Supplement</b></p>	
<p><b>REGULATORY REQUIREMENTS:</b></p>	<p><b>REVIEWER CHECKS:</b>  <b>October 1997</b></p>
<p>must have specific training (Conn. Agencies Regs. 22a-449(c)-103(d)).</p>	<p>are trained in proper emergency response for the types of waste being transported.</p> <p>Verify that the training includes, at a minimum:</p> <ul style="list-style-type: none"> <li>- required safety equipment and uses</li> <li>- first aid in the event of accidents with the waste</li> <li>- hazards involved with loading and unloading</li> <li>- the manifest system and the terms used</li> <li>- the physical and chemical properties of the waste being transported</li> <li>- emergency procedures for the waste being transported.</li> </ul>
<p><b>HW.100.6.CT.</b> Transporters must report spills to the Commissioner (Conn. Agencies Regs. 22a-449(c)-103(d)).</p>	<p>Verify that any release that has been reported to the National Response Center pursuant to 40 CFR 302, is reported separately to the Commissioner using the 24-h Emergency Spill Response telephone number at (203) 566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ALL TSDFs</b></p> <p><b>HW.105. General</b></p> <p><b>HW.105.1.CT.</b> TSDFs must submit annual reports (Conn. Agencies Regs. 22a-449(c)-104(a)(2)(D)).</p>	<p>Verify that TSDFs in Connecticut submit annual reports by 1 March of each year.</p> <p>(NOTE: The Federal requirement is for biennial submissions; see HW.145 in the TEAM Guide.)</p>

## Appendix 4-1

### Regulations Incorporated by Reference

(Source: Ct. Agencies Regs. 22a-449(c)-100 through 22a-449(c)-106, 22a-449(c)-108, and 22a-449(c)-110)  
[Revised October 1997]

The State of Connecticut incorporates by reference the following portions of the Code of Federal Regulations (CFR) revised as of 1 July 1989:

- 49 CFR Parts 171 through 179 inclusive are incorporated by reference in their entirety
- 40 CFR 260 is incorporated in its entirety except for:
  1. the following provisions which are not incorporated:
    - A. those portions providing definitions different than the following:
      - i. Accumulated Speculatively - A material accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that (1) the material is potentially recyclable; (2) the material has a feasible means of being recycled; and (3) all material is recycled within one year of the date on which accumulation of that material begins. To demonstrate that a material is recycled within one year, the date upon which each period of accumulation begins shall be clearly marked and visible for inspection on each container or tank
      - ii. Administrator" or Regional Administrator - The Commissioner of Environmental Protection, or her designee, except that in 40 CFR 262.50 through 262.57 inclusive, "Administrator" means the Administrator of the Environmental Protection Agency, or his designee, and "Regional Administrator" means the Regional Administrator for the EPA Region in which the facility is located, or his designee
      - iii. Agency or EPA - The Connecticut Department of Environmental Protection, except that in 40 CFR 262.12, 262.50 through 262.57 inclusive, 263.11, 264.11, and 265.11 "Agency" or "EPA" means the United States Environmental Protection Agency
      - iv. CFR - The Code of Federal Regulations revised as of July 1, 1989, unless otherwise specified
      - v. Commissioner - The Commissioner of Environmental Protection of the State of Connecticut, or her designee
      - vi. Day - Calendar day, unless otherwise specified
      - vii. Department or DEP - The Connecticut Department of Environmental Protection
      - viii. Impermeable or Impervious - A natural in-place soil or emplaced soil material having a permeability of less than or equal to  $1.0 \times 10^{-7}$  cm/sec, and, in the case of an artificial liner, the liner and its construction and use have been approved in writing by the Commissioner
      - ix. Manifest - The shipping document EPA form 8700-22, originated and signed by the generator in accordance with the instructions included in the Appendix to 40 CFR Part 262 and section 102 of these regulations
      - x. Manifest document number - The U.S. EPA twelve digit identification number assigned to the generator plus a unique five digit document number assigned to the Manifest by the generator for recording and reporting purposes, and the number printed on the Manifest prescribed by the Commissioner
      - xi. Person - Persons and municipalities as those terms are defined in section 22a-423 of the Connecticut General Statutes, unless otherwise specified
      - xii. Release - Any discharge, as defined in 40 CFR 260.10, or any migration of substances from a waste or combination of wastes into the environment
      - xiii. Residential boiler - Any boiler that is used in whole or in part to heat a residential building
      - xiv. Residential building - Any house, apartment, apartment complex with four or less units, condominium complex with four or less units, cooperative complex with four or less units, trailer, mobile home or other structure occupied by individuals as a dwelling

- B. The definition of Small Quantity Generator (SQG) in 40 CFR 260.10 (see ECAP)
- C. 40 CFR 260 Subpart C (which relates to rulemaking petitions)
- 2. the following changes:
  - A. CFR 260.1(a) -- delete "265" and replace with "266"
  - B. CFR 260.2(a) -- delete "265" and replace with "266"
  - C. CFR 260.3, introductory sentence -- delete "265" and replace with "266"
  - D. CFR 260.10, introductory sentence -- delete "265" and replace with "266"
- 40 CFR 261 is incorporated by reference in its entirety except for:
  - 1. the following provisions which are not incorporated:
    - A. 40 CFR 261.1(c)(8) (which relates to materials accumulated speculatively)
    - B. 40 CFR 261.4(b)(6) (which excludes waste failing the EP toxicity test because chromium is present)
  - 2. the following provisions are incorporated by reference with the specified changes:
    - A. 40 CFR 261.1(a) -- delete "265" and replace with "266"
    - B. Table 1 in 40 CFR 261.2(c) -- add an asterisk (\*) to column 4 for the category "Commercial Chemical Products listed in 40 CFR 261.33."
    - C. 40 CFR 261.3(c)(2)(i) -- delete "but not"
    - D. 40 CFR 261.5(a) -- after "in that month" add "provided that such waste does not include more than:
      - i. a total of one kilogram of acute hazardous wastes listed in 40 CFR sections 261.31, 261.32, or 261.33(e), or
      - ii. a total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in 40 CFR sections 261.31, 261.32, or 261.33(e), provided that there is no more than a total of one kilogram of acute hazardous waste contained in that residue, soil, waste or debris."
    - E. 40 CFR 261.5(e)(2) -- after "or 261.33(e)" add "provided that there is no more than a total of one kilogram of acute hazardous waste contained in that residue, soil, waste or debris."
    - F. 40 CFR 261.5 (f)(3)(iv) -- after "State" add "other than Connecticut"; after "waste" add "in a State other than Connecticut"
    - G. 40 CFR 261.5(g)(3)(iv) -- after "State" add "other than Connecticut"; after "waste" add "in a State other than Connecticut"
    - H. 40 CFR 261.5(h) -- after "mixed with non-hazardous waste" delete "and" and replace with "but will not"; after "reduced requirements" delete "even though" and replace with "if"; delete "unless the mixture meets any of the characteristics of hazardous waste identified in Subpart C," add at the end "If the mixture exceeds such quantity limitations, the mixture is subject to full regulation under these regulations."
    - I. 40 CFR 261.5(j) -- delete "Subpart E" and replace with "Subpart D"
    - J. 40 CFR 261.6(a)(3)(iv) -- after "scrap metal" add "which meets neither the characteristic of ignitability in 40 CFR 261.21 nor the characteristic of reactivity in 40 CFR 261.23."
- 40 CFR Part 262 is incorporated by reference in its entirety except for:
  - 1. 40 CFR 262.20(e) (which exempts a small quantity generator from the manifesting requirements provided the small quantity generator has a contractual agreement with a reclaimer) which is not incorporated
  - 2. the following changes:
    - A. 40 CFR 262.10(e) -- delete "section 3008 of the Act" and replace with "sections 22a-131 and 22a-131a of the general statutes"
    - B. 40 CFR 262.34(a)(1) -- after "the generator complies with Subpart I of 40 CFR Part 265" add "and 40 CFR 264.175"; after "except 265.197(c), and" add "with"
    - C. 40 CFR 262.34(a)(3) -- after "Hazardous Waste" add "and other words that identify the contents of the containers or tanks, such as the chemical name"
    - D. 40 CFR 262.34(a)(4) -- after "265.16" add "and 265.17."

- E. 40 CFR 262.34(c)(1)(ii) -- delete the word "either"; delete "or with" after "Hazardous Waste" and replace with "and"; at the end of the paragraph add ", such as the chemical name."
- F. 40 CFR 262.34(d)(1) -- delete the number "6000" and replace with the number "1000"
- G. 40 CFR 263.34(f) -- delete the number "6000" and replace with the number "1000"
- H. 40 CFR 262.41(a) -- delete "a single copy" and replace with "three copies"; after paragraph (8) add a new paragraph (9) as follows: "(9) Any other information which the Commissioner specifies relating to the generator's activities."
- I. 40 CFR 262.44 -- in paragraph (a), delete "(a), (c), and (d)" after "Section 262.40"; in paragraph (b), delete "and"; in paragraph (c), delete the period and replace with "; and"; add a new paragraph (d) as follows: "(d) Section 262.41, biennial reporting."
- J. 40 CFR 262.70 -- at the end of the paragraph add "and with any applicable federal, state, or local law which is more stringent than the pesticide label."
- K. 40 CFR 262 Appendix, Form 8700-22
  - in the upper right-hand corner, after "Information in the shaded areas is not required by Federal law" add "but is required by State law."
- (L) 40 CFR 262 Appendix, Instructions for Form 8700-22, Item 20 -- delete the second paragraph beginning with "Items A - K are not required by Federal regulations . . ." and replace with "Items A - K are required in the State of Connecticut."
- 40 CFR Part 263 is incorporated by reference in its entirety except for:
  - 1. the following provisions which are not incorporated:
    - A. 40 CFR 263.12 (which allows transporters to store hazardous waste for a period of ten days without being subject to regulation under 40 CFR Parts 270, 264, 265 and 268)
    - B. 40 CFR 263.20(h) (which exempts a transporter from complying with 263.20 provided he is transporting waste from a small quantity generator that has a reclamation agreement)
  - 2. the following changes:
    - A. 40 CFR 263.20(g)(4) -- after "United States" add "and send a copy of the manifest to the Commissioner within thirty days of the date the waste left the United States."
    - B. 40 CFR 263.30(b) -- delete "an official (State or local government or a Federal Agency)" and replace with "the Commissioner or an official of a Federal Agency"; after "EPA identification numbers" add "or DEP Transporter Permits; at the end of the paragraph add "The waste must be disposed of in accordance with these regulations."
    - C. 40 CFR 263.30(c)(1) -- after the telephone number for the National Response Center add "and give notice to the Commissioner, using the 24-hour Emergency Spill Response telephone number at (203) 566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company."
    - D. 40 CFR 263.31 -- after "local officials" add "(to the extent that actions required or approved by local officials are consistent with those required or approved by Federal or State officials)"
- 40 CFR Part 264 is incorporated by reference in its entirety except for:
  - 1. the following provisions which are not incorporated:
    - A. 40 CFR 264.1(d) (which relates to underground injection)
    - B. 40 CFR 264.1(f)(1) (which relates to underground injection)
    - C. 40 CFR 264.90(b) (which provides for an exemption for certain types of units for releases into the uppermost aquifer)
    - D. 40 CFR 264.314(d)(1) & (3) (which relates to placing free liquids in landfills)
  - 2. The following changes:
    - A. 40 CFR 264.13(a)(4) -- at the end of the paragraph add "A copy of the manifest shall be kept with the waste analysis."
    - B. 40 CFR 264.71(a)(4) -- after "generator" add ", generator state and consignment state"
    - C. 40 CFR 264.71(b)(4) -- after each "generator" add ", generator state and consignment state"
    - D. 40 CFR 264.75 -- In the title for the section, delete "Biennial" and replace with "Annual"; delete "the biennial" and replace with "the annual"; delete "a single copy" and replace with "three copies"; delete each "a biennial" and replace with "an annual"; delete "even numbered"; after



- paragraph (j), add a new paragraph (k) as follows: "(k) Any other information which the Commissioner specifies relating to the facility's activities."
- E. 40 CFR 264.192(d) -- after "performed" add "and the tank system tested again for tightness"
  - F. 40 CFR 264.193(c) -- in the Note, after each "as amended" add "and chapter 446k of the general statutes, as amended"
  - G. 40 CFR 264.196(b)(1) -- after "demonstrates" add "to the Commissioner and the Commissioner agrees"; at the end of the paragraph add "The owner or operator shall make all reasonable efforts to mitigate the effect of the release."
  - H. 40 CFR 264.196(d)(1) -- delete "Regional Administrator within 24 hours of" and replace with "Commissioner immediately upon"; delete "If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement" and replace with "Any release that has been reported to the National Response Center pursuant to 40 CFR Part 302, must still be reported separately to the Commissioner using the 24-hour Emergency Spill Response telephone number at (203) 566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company."
  - I. 40 CFR 264.272(a) -- after "degraded" add "or" and delete "or immobilized"
  - J. 264.272(c)(2) -- after "degraded" add "or" and delete "or immobilized"
- 40 CFR Part 265 is incorporated by reference in its entirety except for:
    - 1. the following provisions which are not incorporated:
      - A. 40 CFR 265.90(c) (which provides for a waiver of ground-water monitoring requirements)
      - B. 40 CFR 265.90(e) (which provides for a waiver for surface impoundments under specified conditions)
      - C. 40 CFR 265.201(b)(3) (which allows small quantity generators to operate uncovered tanks with 60 centimeters of freeboard)
      - D. 40 CFR 265.201(e)(1)(iii) (which allows small quantity generators to store ignitable and/or reactive waste in a tank used solely for emergencies)
      - E. 40 CFR 265.314(c)(1) & (3) (which relates to placing free liquids in landfills)
      - F. 40 CFR 265 Subpart R (which relates to underground injection)
    - 2. the following changes:
      - A. 40 CFR 265.13(a)(4) -- at the end of the paragraph add "A copy of the manifest shall be kept with the waste analysis."
      - B. 40 CFR 265.71(a)(4) -- after "generator" add ", generator state and consignment state"
      - C. 40 CFR 265.71(b)(4) -- after each "generator" add ", generator state and consignment state"
      - D. 40 CFR 265.75 -- in the title for the section, delete "Biennial" and replace with "Annual"; delete "the biennial" and replace with "the annual"; delete "a single copy" and replace with "three copies"; delete each "a biennial" and replace with "an annual"; delete "even numbered"; after paragraph (j), add a new paragraph (k) as follows: "(k) Any other information which the Commissioner specifies relating to the facility's activities."
      - E. 40 CFR 265.192(d) after "performed" add "and the tank system tested again for tightness"
      - F. 40 CFR 265.193(c) -- in the Note, after each "as amended" add "and chapter 446k of the general statutes, as amended"
      - G. 40 CFR 265.196(b)(1) -- after "demonstrates" add "to the Commissioner and the Commissioner agrees"; at the end of the paragraph add "The owner or operator shall make all reasonable efforts to mitigate the effect of the release."
      - H. 40 CFR 265.196(d)(1) -- delete "Regional Administrator within 24 hours of" and replace with "Commissioner immediately upon"; delete "If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement" and replace with "Any release that has been reported to the National Response Center pursuant to 40 CFR Part 302, must still be reported separately to the Commissioner using the 24-hour Emergency Spill Response telephone number at (203) 566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company."
      - I. 40 CFR 265.201(a) -- delete "6000" and replace with "1000"

- J. 40 CFR 265.222(b) -- after "obtains" add "the Commissioner's prior written approval of a"; after "overtopping," in the last sentence add "and the Commissioner's approval"
- K. 40 CFR 265.229(b)(2) -- after "obtains" add "the Commissioner's prior written approval of a"
- L. 40 CFR 265.229(b)(3) -- after "it" add "and the Commissioner's approval"
- M. 40 CFR 265.272(a) -- delete paragraph (a) and replace with the language of 40 CFR 264.272(a) as modified in subparagraph 104(a)(2)(I) of these regulations.
- N. 40 CFR 265.375(c) -- after "lead" add ", cadmium,"
- 40 CFR Part 266 is incorporated by reference in its entirety except that 40 CFR 266.80(a) is incorporated with the following change: in the second sentence, add "for recycling" after each "batteries" and add "themselves" after "but do not."
- 40 CFR Part 268 is incorporated by reference in its entirety except that 40 CFR 268.6 (which relates to petitions to EPA to allow land disposal of a waste prohibited under 40 CFR 268 Subpart C)
- 40 CFR Part 270 and 124 which are listed in 40 CFR 271-14 are incorporated by reference in their entirety except for the following provisions which are not incorporated:
  - 1. 40 CFR 270.4 (which relates to effect of a permit)
  - 2. 40 CFR 270.60(b) (which relates to underground injection wells)
  - 3. 40 CFR 270.64 (which relates to interim permits for UIC wells).

**SECTION 5**  
**NATURAL RESOURCES MANAGEMENT**

**Connecticut Supplement, October 1997**

This section covers the state requirements for Natural Resources Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

**Definitions**

- *Act* - Sections 22a-36 to 45 inclusive of the Connecticut General Statute, as amended (Title 22a Regulations of Connecticut State Agencies Part 39 Section 2 (Conn. Agencies Regs. 22a-39-2)).
- *Commissioner* - the Commissioner of the Department of Environmental Protection (Conn. Agencies Regs. 22a-39-2).
- *Conserve and Conservation* - to use all methods and procedures necessary to maintain or increase the populations of any endangered or threatened species to the point at which the provisions of the endangered species statutes are no longer necessary, including, but not limited to, all activities associated with resources management, such as research, census, monitoring, regulation and law enforcement, habitat acquisition, restoration and maintenance, propagation, live trapping, transplantation and regulated taking (Connecticut General Statutes (Conn. Gen. Stat.) Section 26-304).
- *Department* - the Department of Environmental Protection (Conn. Agencies Regs. 22a-39-2).
- *Deposit* - includes, but is not limited to, fill, grade, dump, place, discharge, or emit (Conn. Agencies Regs. 22a-39-2).
- *Disturbing the Natural and Indigenous Character of the Land* - the activity will significantly disturb the inland wetland or water course by reason of removal or deposition of material, will cause the alteration or obstruction of water flow, or will result in the pollution of the wetland or water course (Conn. Agencies Regs. 22a-39-3.2).
- *Endangered Species* - any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an endangered species pursuant to the Federal *Endangered Species Act* (Conn. Gen. Stat. 26-304).
- *Endangered Species Act* - the *Endangered Species Act* of 1973, Public Law 93-205, as amended from time to time (Conn. Gen. Stat. 26-304).
- *License* - the whole or any part of a permit, certificate of approval or similar form of permission which may be required of any person by the provisions of the requirements in the Natural Resources Management section or the Act (Conn. Agencies Regs. 22a-39-2).
- *Local Inland Wetlands Agency* - the agency empowered by municipal ordinance to implement and administer the Act and having jurisdiction over the inland wetlands and water courses of such municipality (Conn. Agencies Regs. 22a-39-2).

- *Material* - any substance, solid or liquid, organic or inorganic, including, but not limited to, soil, sediment, aggregate, land, gravel, clay, bog, mud, debris, sand, refuse, or waste (Conn. Agencies Regs. 22a-39-2).
- *Native* - any species indigenous to this state (Conn. Gen. Stat. 26-304).
- *Plants* - any member of the plant kingdom and parts thereof (Conn. Gen. Stat. 26-304).
- *Pollution* - any harmful thermal effect or the contamination or rendering unclean or impure of any wetlands or water courses of the State of Connecticut by reason of any waste or other materials discharged or deposited therein by any public or private sewer, or otherwise, so as directly or indirectly to come in contact with, any wetlands or water courses (Conn. Agencies Regs. 22a-39-2).
- *Species* - any species, subspecies, or variety of animal or plant, and includes any distinct population segment of any animal or plant (Conn. Gen. Stat. 26-304).
- *Take or Taking* - to capture, collect, destroy, harm, hunt, kill, pursue, shoot, trap, snare, net, possess, transport, remove, sell or offer for sale, export or import, or to attempt to engage in any such conduct or any act of assistance to any other person in taking or attempting to take such native wildlife and native plants whether or not such act results in capture or collection (Conn. Gen. Stat. 26-304).
- *Threatened Species* - any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a threatened species pursuant to the Federal *Endangered Species Act*, except for such species determined to be endangered by the Commissioner in accordance with Conn. Gen. Stat. 26-306 (Conn. Gen. Stat. 26-304).
- *Water Courses* - rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water, natural or artificial, public or private which are contained within, flow through, or border upon the State of Connecticut or any portion thereof, not regulated pursuant to Sections 22-7h to 22-7o inclusive of the Conn. Gen. Stat., as amended (Conn. Agencies Regs. 22a-39-2).
- *Wetlands* - land, including submerged land, not regulated pursuant to Sections 22-7h to 22-7o inclusive of the Conn. Gen. Stat., as amended, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and flood plain by the National Cooperative Soil Survey (as may be amended from time to time) of the U.S. Soil Conservation Service (Conn. Agencies Regs. 22a-39-2).
- *Wildlife* - all species of invertebrates, fish, amphibians, reptiles, birds, and mammals which are wild by nature and parts thereof (Conn. Gen. Stat. 26-304).

NATURAL RESOURCES MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS		
REFER TO CHECKLIST ITEMS:	REFER TO PAGE NUMBERS:	
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
Water Resource Management	NR.15.1.CT. and NR.15.2.CT.	5-4
Wildlife	NR.20.1.CT.	5-6

GUIDANCE FOR APPENDIX USERS		
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:	REFER TO PAGE NUMBERS:
3-1	Threatened and Endangered Wildlife	3-7

**COMPLIANCE CATEGORY:  
NATURAL RESOURCES MANAGEMENT  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>NR.15. WATER RESOURCE MANAGEMENT</b></p> <p><b>NR.15.1.CT.</b> Regulated activities in inland wetlands and watercourses must be permitted (Conn. Agencies Regs. 22a-39-3, 22a-39-4).</p>	<p>Verify that an installation/CW facility obtains a permit from the Commissioner or local inland wetlands agency prior to conducting or causing to be conducted any activity which removes material from, deposits material in, obstructs, constructs, alters, or pollutes any inland wetlands or water course.</p> <p>Verify that an installation/CW facility obtains a permit from the Commissioner prior to conducting or causing to be conducted:</p> <ul style="list-style-type: none"> <li>- construction or modification of any dam</li> <li>- construction or placement of any obstruction within channel encroachment lines</li> <li>- construction or placement of any structure or obstruction within tidal, coastal and navigable waters</li> <li>- diversion of water for public and domestic use</li> <li>- discharges into waters of the state.</li> </ul> <p>(NOTE: The following activities do not require a permit as long as they do not disturb the natural and indigenous character of the land (see definitions):</p> <ul style="list-style-type: none"> <li>- conservation of soil, vegetation, water, fish, shellfish, and wildlife</li> <li>- outdoor recreation including play and sporting areas, golf courses, field trails, nature study, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting fishing, and shellfishing where otherwise legally permitted and regulated.)</li> </ul> <p>(NOTE: The following activities are permitted as of right:</p> <ul style="list-style-type: none"> <li>- grazing, farming, nurseries, gardening, and harvesting of crops and farm ponds of 3 acres or less</li> <li>- a residential home which either: <ul style="list-style-type: none"> <li>- has a building permit</li> <li>- is on an approved subdivision lot</li> </ul> </li> <li>- boat anchorage or mooring</li> <li>- uses incidental for the enjoyment and maintenance of residential property (defined as the largest minimum residential lot site permitted), provided that in any town where there are no zoning regulations establishing minimum residential lot sites, the largest minimum lot site is 2 acres</li> <li>- construction and operation by water supply companies or municipal water supply systems of dams, reservoirs and other facilities in connection with impounding, storing, and withdrawal of water in connection with public</li> </ul>

**COMPLIANCE CATEGORY:**  
**NATURAL RESOURCES MANAGEMENT**  
Connecticut Supplement

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p><b>NR.15.2.CT.</b> Regulated activities in tidal wetlands must be permitted (Conn. Agencies Regs. 22a-30-6)</p>	<p>water supplies.)</p> <p>Verify that an installation/CW facility obtains a permit from the Commissioner prior to conducting or causing to be conducted on any tidal wetlands any of the following:</p> <ul style="list-style-type: none"> <li>- draining, dredging, excavation, or removal of soil, mud, sand, gravel, aggregate of any kind, or rubbish from any wetland</li> <li>- dumping, filling, or depositing on a wetland any soil, stones, sand, gravel, mud, aggregate of any kind, rubbish, or similar material either directly or otherwise</li> <li>- erection of structures, driving of piles, or placing of obstructions on a wetland whether or not such activity changes the tidal ebb and flow.</li> </ul>

**COMPLIANCE CATEGORY:  
NATURAL RESOURCES MANAGEMENT  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>NR.20. WILDLIFE</b></p> <p><b>NR.20.1.CT.</b> Installations/ CW facilities are required to protect threatened and endangered species (Conn. Gen. Stat. 26-311).</p>	<p>Determine whether the installation/CW facility has received an exemption from this requirement for activities that may affect endangered or threatened species from the Commissioner.</p> <p>Verify that the installation/CW facility does not allow the taking, transport, possession, processing, import, export, buying, or selling of any wild animal or wild plant listed in Appendix 5-1.</p> <p>Verify that the installation/CW facility does not destroy or adversely modify essential habitat so as to reduce the viability of the habitat to support endangered or threatened species or so as to kill, injure, or reduce the likelihood of species survival.</p> <p>(NOTE: The following activities are allowed:</p> <ul style="list-style-type: none"> <li>- legal activities performed on the person's own land that may result in the incidental taking of endangered or threatened animal and plant species or species of special concern</li> <li>- any action authorized pursuant to an exemption or permit.)</li> </ul>



## Appendix 5-1

### Threatened and Endangered Wildlife (Source: Connecticut Department of Environmental Protection)

Scientific Name	Common Name	Status *
<b>MAMMALS</b>		
<i>Cryptotis parva</i>	Least shrew	E
<b>BIRDS</b>		
<i>Ammodramus savannarum</i>	Grasshopper sparrow	E
<i>Asio otis</i>	Long-eared owl	E
<i>Bartramia longicauda</i>	Upland sandpiper	E
<i>Botaurus lentiginos</i>	American bittern	E
<i>Circus cyaneus</i>	Northern harrier	E
<i>Cistothorus platensis</i>	Sedge wren	E
<i>Falco peregrinus</i>	Peregrine falcon	E
<i>Haliaeetus leucocephalus</i>	Bald eagle	E
<i>Icteria virens</i>	Yellow-breasted chat	E
<i>Melanerpes erythrocephalus</i>	Red-headed woodpecker	E
<i>Podilymbus podiceps</i>	Pied-billed grebe	E
<i>Poocetes gramineus</i>	Vesper sparrow	E
<i>Sterna dougallii</i>	Roseate tern	E
<i>Accipter cooperi</i>	Cooper's hawk	T
<i>Accipter striatus</i>	Sharp-shinned hawk	T
<i>Asio flammeus</i>	Short-eared owl	T
<i>Casmerodius albus</i>	Great egret	T
<i>Catoptrophorus semipalmatus</i>	Willet	T
<i>Charadrius melodus</i>	Piping plover	T
<i>Egretta thula</i>	Snowy egret	T
<i>Eremophila alpestris</i>	Horned lark	T
<i>Gallinula chloropus</i>	Common moorhen	T
<i>Ixobrychus exilis</i>	Least bittern	T
<i>Laterallus jamaicensis</i>	Black rail	T
<i>Sterna antillarum</i>	Least tern	T
<i>Tyto alba</i>	Barn owl	T
<b>REPTILES</b>		
<i>Caretta caretta</i>	Loggerhead	T
<i>Chelonia mydas</i>	Atlantic green turtle	T
<i>Clemmys muhlenbergii</i>	Bog turtle	E
<i>Crotalus horridus</i>	Timber rattlesnake	E
<i>Dermochelys coriacea</i>	Leatherback	E
<i>Eumeces fasciatus</i>	Five-lined skink	T
<i>Lepidochelys kempii</i>	Atlantic ridley turtle	E

Scientific Name	Common Name	Status *
<b>AMPHIBIANS</b>		
<i>Ambystoma laterale</i>	Blue-spotted salamander	T
<i>Gyrinophilus porphyriticus</i>	Northern spring salamander	T
<i>Plethodon glutinosus</i>	Northern slimy salamander	T
<i>Scaphiopus holbrookii</i>	Eastern spadefoot	E
<b>FISH</b>		
<i>Acipenser brevirostrum</i>	Shortnose sturgeon	E
<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	T
<b>INVERTEBRATES</b>		
<i>Calephelis borealis</i>	Northern metalmark	E
<i>Alasmidonta heterodon</i>	Dwarf wedge mussel	E
<i>Anarta luteola</i>	Noctuid moth	E
<i>Cicindela puritana</i>	Puritan tiger beetle	E
<i>Dorocordulia liberia</i>	Racket-tailed emerald	E
<i>Elimia virginica</i>	Virginia river snail	E
<i>Erynnis persius persius</i>	Persius duskywing	E
<i>Leptodea ochracea</i>	Tidewater mucket	E
<i>Lycaena epixanthe</i>	Bog copper	T
<i>Grammia speciosa</i>	Bog tiger moth	E
<i>Hemileuca maia</i>	Buck moth	E
<i>Mitoura hesseli</i>	Hessel's hairstreak	E
<i>Hybomitra frosti</i>	Horse fly	T
<i>Hybomitra longiglossa</i>	Horse fly	E
<i>Papaipema appassionate</i>	Pitcher plant borer	T
<i>Phyllonorycter ledella</i>	Labrador tea tentiform	T
<i>Willamsonia lintneri</i>	Banded bog skimmer	E
<i>Zale curema</i>	Noctuid moth	T
<b>PLANTS</b>		
<i>Abies balsamea</i>	Balsam fir	E
<i>Agalinis acuta</i>	Sandplain gerardia	E
<i>Alopecurus aequalis</i>	Orange foxtail	T
<i>Amelanchier sanguinea</i>	Roundleaf shadbush	E
<i>Andromeda glaucophylla</i>	Bog rosemary	E
<i>Anemone canadensis</i>	Canada anemone	E
<i>Bouteloua curtipendula</i>	Side-oats grama-grass	E
<i>Arceuthobium pusillum</i>	Dwarf mistletoe	E
<i>Arenaria glabra</i>	Smooth mountain sandwort	T
<i>Arenaria macrophylla</i>	Large-leaved sandwort	E
<i>Arethusa bulbosa</i>	Arethusa	E
<i>Carex alata</i>	Broadwing sedge	E
<i>Aristida tuberculosa</i>	Beach needlegrass	T

Scientific Name	Common Name	Status *
<i>Aristolochia serpentaria</i>	Virginia snakeroot	T
<i>Asclepias variegata</i>	White milkweed	E
<i>Asplenium montanum</i>	Mountain spleenwort	T
<i>Carex buxbaumii</i>	Brown bog sedge	E
<i>Asplenium ruta-muraria</i>	Wallrue spleenwort	T
<i>Carex castanea</i>	Chestnut colored sedge	T
<i>Aster blakei</i>	Blake's aster	E
<i>Aster nemoralis</i>	Bog aster	T
<i>Carex crawei</i>	Crawe's sedge	E
<i>Aster radula</i>	Rough-leaved aster	E
<i>Aster spectabilis</i>	Showy aster	T
<i>Carex davisii</i>	Davis' sedge	E
<i>Carex formosa</i>	Handsome sedge	T
<i>Athyrium pycnocarpon</i>	Narrow-leaved glade fern	E
<i>Carex limosa</i>	Sedge	E
<i>Chamaelirium luteum</i>	Devil's-bit	E
<i>Cheilanthes langosa</i>	Hairy-lip fern	E
<i>Chrysopsis falcata</i>	Sickle-leaved golden aster	E
<i>Coelopleurum lucidum</i>	Sea-coast angelica	E
<i>Corallorhiza trifida</i>	Early coralroot	T
<i>Corydalis flavula</i>	Yellow corydalis	T
<i>Carex oligocarpa</i>	Eastern few-fruited sedge	E
<i>Cryptogramma stelleri</i>	Slender cliff-brake	E
<i>Carex polymorpha</i>	Variable sedge	E
<i>Carex prairea</i>	Prairie sedge	T
<i>Carex pseudo-cyperus</i>	Cyperus-like sedge	E
<i>Cypripedium reginae</i>	Showy lady's-slipper	E
<i>Carex schweinitzii</i>	Schweinitz's sedge	T
<i>Dalibarda repens</i>	Dew drop	E
<i>Desmodium humifusum</i>	Trailing tick-trefoil	E
<i>Carex viridula</i>	Little green sedge	E
<i>Dicentra canadensis</i>	Squirrel corn	T
<i>Dichanthelium scabriusculum</i>	Panic grass	E
<i>Castilleja coccinea</i>	Indian paintbrush	E
<i>Floerkea proserpinacoides</i>	Stiff mermaid-weed	E
<i>Gaultheria hispidula</i>	Creeping snowberry	T
<i>Diplachne maritima</i>	Saltpond grass	E
<i>Gaylussacia dumosa</i>	Dwarf huckleberry	T
<i>Drosera filiformis</i>	Thread-leaf sundew	E
<i>Gentiana quinquefolia</i>	Stiff gentian	E
<i>Dryopteris campyloptera</i>	Mountain wood-fern	E
<i>Dryopteris goldiana</i>	Goldie's fern	T
<i>Echinoderus tenellus</i>	Bur-head	E
<i>Eleocharis equisetoides</i>	Horse-tail spike rush	E
<i>Helianthemum propinquum</i>	Low frostweed	E
<i>Eleocharis quadrangulata</i>	Spike rush	E
<i>Heteranthera reniformis</i>	Kidneyleaf mud-plantain	E
<i>Houstonia longifolia</i>	Longleaf bluet	E

Scientific Name	Common Name	Status *
<i>Hudsonia ericoides</i>	Golden heather	E
<i>Hudsonia tomentosa</i>	False beach-heather	T
<i>Equisetum scirpoides</i>	Dwarf scouring rush	T
<i>Hydrastis canadensis</i>	Golden seal	E
<i>Eriophorum spissum</i>	Hare's tail	T
<i>Hypericum pyramidatum</i>	Great St. John's-wort	T
<i>Eupatorium album</i>	White thoroughwort	E
<i>Eupatorium aromaticum</i>	Small white snakeroot	E
<i>Ilex glabra</i>	Inkberry	T
<i>Isotria medeoloides</i>	Small whorled pogonia	E
<i>Lachnanthes carolina</i>	Carolina redroot	E
<i>Ledum groenlandicum</i>	Labrador tea	T
<i>Ligusticum scoticum</i>	Scotch lovage	E
<i>Liparis lilifolia</i>	Lily-leaved twayblade	E
<i>Lipocarpa micrantha</i>	Dwarf bulrush	E
<i>Ludwigia sphaerocarpa</i>	Globe-fruited False-loosestrife	E
<i>Malaxis brachypoda</i>	White adder's-mouth	E
<i>Malaxis unifolia</i>	Green adder's-mouth	E
<i>Moneses uniflora</i>	One-flowered wintergreen	E
<i>Morus rubra</i>	Red mulberry	E
<i>Muhlenbergia capillaris</i>	Long-awn hairgrass	E
<i>Onosmodium virginianum</i>	Gravel weed	E
<i>Ophioglossum vulgatum</i>	Adder's-tongue	T
<i>Panicum amarum</i>	Panic grass	T
<i>Paspalum laeve</i>	Field paspalum	E
<i>Pellaea glabella</i>	Smooth cliff-brake	E
<i>Petasites frigidus</i>	Sweet coltsfoot	T
<i>Pinus resinosa</i>	Red pine	E
<i>Platanthera blephariglottis</i>	White-fringed orchid	E
<i>Platanthera ciliaris</i>	Yellow-fringed orchid	T
<i>Polygala nuttallii</i>	Nuttall's milkwort	E
<i>Polygala senega</i>	Seneca snakeroot	E
<i>Polymnia canadensis</i>	Small-flowered leafcup	E
<i>Populus heterophylla</i>	Swamp cottonwood	E
<i>Potamogeton hillii</i>	Hill's pondweed	E
<i>Potamogeton strictifolius</i>	Straight-leaved pondweed	E
<i>Potentilla tridentata</i>	Three-toothed cinquefoil	E
<i>Prunus maritima</i>	Grave's beach plum	E
<i>Psilocarya scirpoides</i>	Long-beaked bald rush	E
<i>Pycnanthemum clinopodioides</i>	Basil mountain-mint	E
<i>Pycnanthemum torrei</i>	Torrey mountain-mint	E
<i>Quercus macrocarpa</i>	Bur oak	E
<i>Ranunculus ambigens</i>	Water-plantain spearwort	E
<i>Ranunculus cymbalaria</i>	Seaside crowfoot	E
<i>Rhynchospora capillacea</i>	Capillary beak-rush	E
<i>Rhynchospora macrostachya</i>	Beaked rush	E
<i>Rotala ramosior</i>	Toothcup	E
<i>Salix exigua</i>	Sandbar willow	T

Scientific Name	Common Name	Status *
<i>Salix pedicellaris</i>	Bog willow	E
<i>Saururus cernuus</i>	Lizard's tail	E
<i>Scheuchzeria palustris</i>	Pod grass	E
<i>Scirpus acutus</i>	Hard-stemmed bulrush	T
<i>Scirpus torreyi</i>	Torrey bulrush	T
<i>Scleria reticularis</i>	Reticulated nutrush	E
<i>Scleria triglomerata</i>	Nutrush	E
<i>Scutellaria leonardii</i>	Small skullcap	E
<i>Smilacina trifolia</i>	Three-leaved Solomon's-seal	T
<i>Solidago ptarmicoides</i>	Prairie goldenrod	E
<i>Solidago rigida</i>	Stiff goldenrod	E
<i>Solidago rugosa</i>	Early wrinkle-leaved goldenrod	E
<i>Spergularia canadensis</i>	Canada sand-spurry	T
<i>Sporobolus cryptandrus</i>	Sand dropseed	E
<i>Sporobolus heterolepis</i>	Northern dropseed	E
<i>Stachys hyssopifolia</i>	Hyssop-leaf hedge-nettle	E
<i>Streptopus amplexifolius</i>	White mandarin	T
<i>Thuja occidentalis</i>	Northern white cedar	T
<i>Trollius laxus</i>	Spreading globe-flower	E
<i>Uvularia grandiflora</i>	Large-flowered bellwort	E
<i>Viola brittoniana</i>	Coast violet	E
<i>Viola canadensis</i>	Canada violet	T
<i>Waldsteinia fragarioides</i>	Barren strawberry	E
<i>Xyris montana</i>	Northern yellow-eyed grass	E
<i>Xyris smalliana</i>	Small's yellow-eyed grass	E
<i>Zizia aptera</i>	Heart leaved golden alexander	E

\* E = Endangered  
T = Threatened

## SECTION 6

### OTHER ENVIRONMENTAL ISSUES

#### Connecticut Supplement, October 1997

This section covers the state requirements for Other Environmental Issues and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

According to the Connecticut Department of Transportation there are no state-wide regulations concerning airport noise control.

#### Definitions

- *Adaptive Reuse* - remodeling and conversion of an obsolete or unused building or other structure for alternate uses. For example, older industrial buildings, warehouses, offices, hotels, garages, etc., could be improved and converted for reuse in terms of industrial processes, residential use as apartments, or other purposes (Regulations of Connecticut State Agencies (Conn. Agencies Regs.) 22a-69-1.1).
- *Hard Site* - any site having the ground surface covered with concrete, asphalt, packed dirt, gravel, or similar acoustically reflective material (Conn. Agencies Regs. 14-80a-1a).
- *Impulse Noise* - noise of short duration (generally less than 1 s), especially of high intensity, abrupt onset and rapid decay, and often rapidly changing spectral composition (Conn. Agencies Regs. 22a-69-1.2).
- *Infrasonic Sound* - sound pressure variations having frequencies below the audible range for humans, generally below 20 Hz; subaudible (Conn. Agencies Regs. 22a-69-1.2).
- *Intrusion Alarm* - a device with an audible signal which, when activated, indicates intrusion by an unauthorized person. Such alarm may be attached to, or within, any building, structure, property, or vehicles (Conn. Agencies Regs. 22a-69-1.1).
- *Lawn Care and Maintenance Equipment* - all engine or motor-powered garden or maintenance tools intended for repetitive use in residential areas, typically capable of being used by a homeowner, and including, but not limited to, lawn mowers, riding tractors, snowblowers, and including equipment intended for infrequent service work in inhabited areas, typically requiring skilled operators, including, but not limited to, chain saws, log chippers or paving rollers (Conn. Agencies Regs. 22a-69-1.1).
- *Nighttime* - 2200 to 0700 local time (Conn. Agencies Regs. 22a-69-1.1).
- *Noise Zone* - an individual unit of land or a group of contiguous parcels under the same ownership as indicated by public land records and, as relates to noise emitters, includes contiguous publicly dedicated street and highway rights-of-way, railroad rights-of-way, and waters of the state. Noise zones are divided into the following categories (Conn. Agencies Regs. 22a-69-1.1 and 22a-69-2.3 through 2.5):
  1. Class A Noise Zone - generally residential areas where human being sleep or areas where serenity and tranquillity are essential to the intended use of the land.
  2. Class B Noise Zone - generally commercial in nature, areas where human beings converse and such conservation is essential to the intended use of the land.
  3. Class C Noise Zone - generally industrial where protection against damage to hearing is essential, and the necessity for conversation is limited.

- *Peak Sound Pressure Level* - the absolute maximum value of the instantaneous sound pressure level occurring in a specified period of time (Conn. Agencies Regs. 22a-69-1.2).
- *Soft Site* - any site having the ground surface covered with grass, other ground cover, or similar acoustically absorptive material (Conn. Agencies Regs. 14-80a-1a).
- *Ultrasonic Sound* - sound pressure variations having frequencies above the audible sound spectrum for humans, generally higher than 20,000 Hz; superaudible (Conn. Agencies Regs. 22a-69-1.2).

**OTHER ENVIRONMENTAL ISSUES  
GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

	<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
The NEPA Process		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.		
Environmental Noise		
State-Specific Requirements		
Motor Vehicles	OO.5.1.CT.	6-4
Noise Limits	OO.5.2.CT. and OO.5.3.CT.	6-4
IRP		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.		
Pollution Prevention		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for DOD and service-specific requirements.		
Program Management		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for DOD and service-specific requirements.		

**GUIDANCE FOR APPENDIX USERS**

<b>REFER TO APPENDIX NUMBERS:</b>	<b>REFER TO APPENDIX TITLES:</b>	<b>REFER TO PAGE NUMBERS:</b>
6-1	Allowable Vehicle Noise Limits	6-7



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Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ENVIRONMENTAL NOISE</b></p> <p><b>OO.5. State-Specific Requirements</b></p> <p><b>Motor Vehicles</b></p> <p><b>OO.5.1.CT.</b> Motor vehicle noise must meet specific requirements (Conn. Agencies Regs. 14-80a-1a through 5a).</p> <p><b>Noise Limits</b></p>	<p>Verify that motor vehicle and snowmobile noise emissions, when measured with the sound measuring microphone located 50 ft from the target point, do not exceed the values in Appendix 6-1.</p> <p>(NOTE: The following operational noise does not have to follow the values shown in Appendix 6-1:</p> <ul style="list-style-type: none"> <li>- sound generated by a warning device</li> <li>- an emergency motor vehicle responding to an emergency call</li> <li>- a snow plow in operation</li> <li>- the sound generated by auxiliary equipment normally operated only when the vehicle is stopped or operating under 5 mph.)</li> </ul> <p>(NOTE: The following sounds or activities are excluded from these requirements:</p> <ul style="list-style-type: none"> <li>- sound generated by natural phenomena, including, but not limited to, wind, storms, insects, amphibious creatures, birds, and water flowing in its natural course</li> <li>- the unamplified sounding of the human voice</li> <li>- the unamplified sound made by any wild or domestic animal</li> <li>- sound created by bells, carillons, or chimes associated with specific religious observances</li> <li>- sound created by a public emergency sound signal attached to an authorized emergency vehicle in the immediate act of responding to an emergency, or located within or attached to a building, pole, or other structure to sound an alarm relating to fire or civil preparedness</li> <li>- sound created by safety and protective devices</li> <li>- farming equipment or farming activity</li> <li>- back-up alarms required by Occupational Health and Safety Agency or other state or Federal safety regulations</li> <li>- sound created by any mobile source of noise, including, but not limited to, such sources as aircraft, automobiles, trucks, and boats.)</li> </ul> <p>(NOTE: The following sounds or activities are exempted from these requirements:</p> <ul style="list-style-type: none"> <li>- conditions caused by natural phenomena, strike, riot, catastrophe, or other condition over which the apparent violator has no control</li> <li>- noise generated by engine-powered or motor-driven lawn care or</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>OO.5.2.CT.</b> Facilities must meet specific requirements regarding the emission of noise (Conn. Agencies Regs. 22a-69-3.1, 3.2, and 3.4 through 3.8).</p>	<p>maintenance equipment between the hours of 0700 and 2100 provided noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises</p> <ul style="list-style-type: none"> <li>- noises created by snow removal equipment at any time provided the equipment is maintained in good repair so as to minimize noise, and noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises</li> <li>- noise originating at airports that is directly caused by aircraft flight operations specifically preempted by the Federal Aviation Administration</li> <li>- noise created by the use of property to conduct speed or endurance events involving motor vehicles, but such exemption is effective only during the specific period of time within which such use is authorized</li> <li>- noise created as a result of, or relating to, an emergency</li> <li>- construction noise</li> <li>- noise created by blasting other than that conducted in connection with construction activities, provided the blasting is conducted between 0800 and 1700 local time at specified hours previously announced to the public, or provided a permit for such blasting has been obtained</li> <li>- noise created by onsite recreational or sporting activity which is sanctioned by the state or local government, provided that noise discharged from exhausts is adequately muffled to prevent loud and/or explosive noises</li> <li>- patriotic or public celebrations not extending longer than one calendar day</li> <li>- noise created by aircraft, or aircraft propulsion components designed for or used in the development of aircraft, under test conditions</li> <li>- noise created by products undergoing test, where one of the primary purposes is evaluation of product noise characteristics and where practical noise control measures have been taken.)</li> </ul> <p>Verify that the facility does not cause or allow the emission of excessive noise beyond the boundaries of its noise zone.</p> <p>(NOTE: Background noise levels caused by sources not subject to these requirements which exceed these standards are considered excessive if the noise emitted exceeds the background noise level by 5 dBA, provided no regulated source emits noise in excess of 80 dBA at any time.)</p> <p>Verify that the facility does not cause or allow the emission of impulse noise in excess of the following:</p> <ul style="list-style-type: none"> <li>- 80 dB peak sound pressure level during the nighttime to any Class A noise zone</li> <li>- 100 dB peak sound pressure at any time to any noise zone.</li> </ul> <p>Verify that the facility does not emit beyond its property infrasonic or ultrasonic</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>OO.5.3.CT.</b> Intrusion alarms must meet specific noise standards (Conn. Agencies Regs. 22a-69-5.1).</p>	<p>sound in excess of 100 dB at any time.</p> <p>Verify that facilities in Class C noise zones do not emit noise exceeding the following levels:</p> <ul style="list-style-type: none"> <li>- to Class C noise zones, 70 dBA</li> <li>- to Class B noise zones, 66 dBA</li> <li>- to Class A noise zones during the day, 61 dBA</li> <li>- to Class A noise zones at night, 51 dBA.</li> </ul> <p>Verify that facilities in Class B noise zones do not emit noise exceeding the following levels:</p> <ul style="list-style-type: none"> <li>- to Class C noise zones, 62 dBA</li> <li>- to Class B noise zones, 62 dBA</li> <li>- to Class A noise zones during the day, 55 dBA</li> <li>- to Class A noise zones at night, 45 dBA.</li> </ul> <p>Verify that facilities in Class A noise zones do not emit noise exceeding the following levels:</p> <ul style="list-style-type: none"> <li>- to Class C noise zones, 62 dBA</li> <li>- to Class B noise zones, 55 dBA</li> <li>- to Class A noise zones during the day, 55 dBA</li> <li>- to Class A noise zones at night, 45 dBA.</li> </ul> <p>(NOTE: Existing sources constructed between 15 June 1978 and 1 January 1960 are given a permanent 5 dBA maximum noise level allowance over levels otherwise required. Sources constructed prior to 1960 are given a permanent 10 dBA maximum noise level allowance. Buildings and other structures that exists as of 15 June 1978 which have been remodeled or converted for adaptive reuse or which may be remodeled or converted at a future date are given a permanent 5 dBA maximum noise level allowance above the noise zone class of the new use of the building.)</p> <p>Verify that, from time of activation of audible signal, the alarm does not emit noise for a period of time exceeding 10 min when attached to any vehicle or 30 min when attached to any building or structure.</p> <p>(NOTE: Repetition of activation of the audible signal due to malfunction, lack of proper maintenance, or lack of reasonable care is considered excessive noise.)</p>

## Appendix 6-1

### Allowable Vehicle Noise Limits (Source: Conn. Agencies Regs. 14-80a)

A. Motor vehicles or combination having a Gross Vehicle Weight Rating (GVWR) of less than 10,000 lb including passenger motor vehicles:

		Manufactured Prior to 1 January 1979	Manufactured On or After 1 January 1979
Highway Operation	Soft Site - < 35 mph	76 dB(A)*	72 dB(A)
	- > 35 mph	82 dB(A)	79 dB(A)
	Hard Site - < 35 mph	78 dB(A)	74 dB(A)
	- > 35 mph	84 dB(A)	81 dB(A)
Stationary Operation	Soft Site -	76 dB(A)	72 dB(A)
	Hard Site -	78 dB(A)	74 dB(A)

\*dB(A) - the standard abbreviation for "A" weighted sound level in decibels.

B. Motor vehicles or combination having a GVWR of 10,000 lb or greater:

Highway Operation	Soft Site - < 35 mph	86 dB(A)*
	- > 35 mph	90 dB(A)
	Hard Site - < 35 mph	88 dB(A)
	- > 35 mph	92 dB(A)
Stationary Operation	Soft Site -	86 dB(A)
	Hard Site -	88 dB(A)

C. Any bus having a GVWR of 10,000 lb or greater:

		Manufactured Prior to 1 January 1979	Manufactured On or After 1 January 1979
Highway Operation	Soft Site - < 35 mph	86 dB(A)*	83 dB(A)
	- > 35 mph	90 dB(A)	88 dB(A)
	Hard Site - < 35 mph	88 dB(A)	86 dB(A)
	- > 35 mph	92 dB(A)	90 dB(A)
Stationary Operation	Soft Site -	86 dB(A)	83 dB(A)
	Hard Site -	88 dB(A)	85 dB(A)

D. Any motorcycle:

		Manufactured Prior to 1 January 1973	Manufactured Between 1 January 1973 and 1 January 1975
Highway Operation	Soft Site - < 35 mph	80 dB(A)*	78 dB(A)
	- > 35 mph	84 dB(A)	82 dB(A)
	Hard Site - < 35 mph	82 dB(A)	80 dB(A)
	- > 35 mph	86 dB(A)	84 dB(A)
Stationary	Soft Site -	80 dB(A)	78 dB(A)

		Manufactured Prior to 1 January 1973	Manufactured Between 1 January 1973 and 1 January 1975
Operation	Hard Site -	82 dB(A)	80 dB(A)

E. Snowmobiles:

		Manufactured Prior to 1 January 1973	Manufactured Between 1 January 1973 and 1 January 1975	Manufactured On or After 1 January 1975
Operation at	Soft Site - < 35 mph	85 dB(A)*	82 dB(A)	78 dB(A)
Any Speed	Hard Site - < 35 mph	87 dB(A)	84 dB(A)	80 dB(A)
Stationary	Soft Site -	86 dB(A)	83 dB(A)	79 dB(A)
Operation	Hard Site -	88 dB(A)	85 dB(A)	81 dB(A)

## SECTION 7

### PESTICIDE MANAGEMENT

Connecticut Supplement, October 1997

This section covers the state requirements for Pesticide Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Antifouling Paint* - a compound, coating, paint, or treatment applied or used for the purpose of controlling fouling organisms on vessels and other structures or equipment in marine or fresh water (Title 22a Regulations of Connecticut State Agencies Part 66 Section 2(c) (Conn. Agencies Regs. 22a-66-2(c))).
- *Borer Control* - the control through the use of pesticides of insects whose larval life takes place within plant stems (Conn. Agencies Regs. 22a-66-1).
- *Certified Applicator* - any individual who is certified by the Pesticide and PCB Management Division of the Bureau of Waste Materials Management of the Department of Environmental Protection of the State of Connecticut (Connecticut General Statutes Chapter 441, Section 22a-47 (Conn. Gen. Stat. 441-22a-47)).
- *Commercial Applicator* - any individual who uses or supervises the use of any restricted-use pesticides or any pesticide on property not owned or rented by the individual(s) or the employer (Conn. Gen. Stat. 441-22a-47).
- *Commercial Boatyard* - a facility that engages for hire in the construction, storage, maintenance, repair, or refurbishing of vessels (Conn. Agencies Regs. 22a-66-2(c)).
- *Fenced Area* - an area that is completely enclosed by a fence, wall, or other natural or artificial barrier that prevents unauthorized entry (Conn. Agencies Regs. 22a-66a-1(a)).
- *Person* - any individual, partnership, association, corporation, government entity, or any organized group of persons whether incorporated or not (Conn. Gen. Stat. 441-22a-47).
- *Pest* - any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, or bacteria, on or in living man or other living animals, that the Commissioner declares to be a pest that is injurious to health or the environment (Conn. Gen. Stat. 441-22a-47).
- *Pesticide* - any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest; any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant (Conn. Gen. Stat. 441-22a-47).
- *Point of Entry* - each location which is designed or generally used for entry onto the property by pedestrians or motor vehicles (Conn. Agencies Regs. 22a-66a-1(a)).
- *Release Rate* - the rate at which a tributyltin compound is released from an antifouling paint containing a tributyltin compound over the long term, as measured using one of the following (Conn. Agencies Regs. 22a-66-2(c)):
  1. the American Society for Testing Material standard test method which the USEPA required in its 29 July 1986 data call-in notice on tributyltin compounds used in antifouling paints

2. any alternative method adopted by the USEPA and published in the Federal Register.

- *Restricted-Use Pesticide* - any pesticide or pesticide use classified as restricted by the Administrator of the U.S. Environmental Protection Agency (USEPA) or by the Commissioner (Conn. Gen. Stat. 441-22a-47).
- *Termite Control* - the extermination of termites within, beneath, or closely adjacent to a structure and the prevention of future termite entry which is accomplished through the use of pesticides (Conn. Agencies Regs. 22a-66-1).
- *Tributyltin Compound* - any organotin compound that has three normal butyl groups attached to a tin atom and with or without an anion, such as chloride, fluoride, oxide (Conn. Agencies Regs. 22a-66-2(c)).
- *Vessel* - every description of watercraft, other than a seaplane on water, used or capable of being used as a means of transportation on water (Conn. Agencies Regs. 22a-66-2(c)).

<b>PESTICIDE MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS</b>																													
<b>REFER TO CHECKLIST ITEMS:</b>		<b>REFER TO PAGE NUMBERS:</b>																											
<p>(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;">Pesticide Applicators</td> <td style="width: 35%;">PM.5.1.CT. through PM.5.3.CT.</td> <td style="width: 30%; text-align: right;">7-4</td> </tr> <tr> <td style="padding-left: 20px;">Sodium Fluoroacetate</td> <td>PM.5.4.CT.</td> <td style="text-align: right;">7-6</td> </tr> <tr> <td>Pesticide Application</td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">General</td> <td>PM.10.1.CT. through PM.10.5.CT.</td> <td style="text-align: right;">7-7</td> </tr> <tr> <td style="padding-left: 20px;">Agriculture</td> <td>PM.20.1.CT.</td> <td style="text-align: right;">7-11</td> </tr> <tr> <td style="padding-left: 20px;">Aerial</td> <td>PM.25.1.CT. and PM.25.2.CT.</td> <td style="text-align: right;">7-12</td> </tr> <tr> <td style="padding-left: 20px;">Other</td> <td>PM.35.1.CT.</td> <td style="text-align: right;">7-14</td> </tr> <tr> <td style="padding-left: 20px;">Documentation</td> <td>PM.40.1.CT.</td> <td style="text-align: right;">7-15</td> </tr> <tr> <td>Disposal</td> <td>PM.55.1.CT.</td> <td style="text-align: right;">7-16</td> </tr> </table>			Pesticide Applicators	PM.5.1.CT. through PM.5.3.CT.	7-4	Sodium Fluoroacetate	PM.5.4.CT.	7-6	Pesticide Application			General	PM.10.1.CT. through PM.10.5.CT.	7-7	Agriculture	PM.20.1.CT.	7-11	Aerial	PM.25.1.CT. and PM.25.2.CT.	7-12	Other	PM.35.1.CT.	7-14	Documentation	PM.40.1.CT.	7-15	Disposal	PM.55.1.CT.	7-16
Pesticide Applicators	PM.5.1.CT. through PM.5.3.CT.	7-4																											
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Disposal	PM.55.1.CT.	7-16																											

<b>GUIDANCE FOR APPENDIX USERS</b>		
<b>REFER TO APPENDIX NUMBER:</b>	<b>REFER TO APPENDIX TITLE:</b>	<b>REFER TO PAGE NUMBER:</b>
7-1	Restricted and Permit Use Pesticides	7-17



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>PM.5. PESTICIDE APPLICATORS</b></p> <p><b>PM.5.1.CT.</b> Pesticide applicators must meet certification requirements (Conn. Gen. Stat. 441-22a-54(a), Conn. Agencies Regs. 22a-66-5(g) and (h)), and 22a-66-6(c)) [Revised October 1997].</p> <p><b>PM.5.2.CT.</b> Use of specific pesticides is prohibited (Conn. Agencies Regs. 22a-66-2(a)).</p>	<p>Verify that personnel carrying out the following activities are certified applicators:</p> <ul style="list-style-type: none"> <li>- application, mixing or handling of pesticides in other than completely closed containers</li> <li>- coming into contact with pesticides through drift for more than brief periods</li> <li>- assisting with the application of pesticides under the supervision of a holder of a supervisory license.</li> </ul> <p>Verify that a certified supervisor either:</p> <ul style="list-style-type: none"> <li>- is present at the time of pesticide application or</li> <li>- provides written instruction to the certified applicator (including the certified supervisor's name and certification number, the certified applicator's name and certification number, the pest to be controlled, the pesticide to be used, and directions for use of the pesticide) and is available if needed.</li> </ul> <p>Verify that personnel using restricted-use pesticides are either certified applicators or under the direct supervision of a certified applicator.</p> <p>Verify that, when a permit-use pesticide is applied, the permit holder is physically present.</p> <p>(NOTE: See Appendix 7-1 for a list of state restricted-use and permit-use pesticides.)</p> <p>Verify that all personnel who apply pesticide or fertilizer by aircraft hold a certificate and a permit.</p> <p>Verify that the following pesticides are not used:</p> <ul style="list-style-type: none"> <li>- arsenic products except the following: <ul style="list-style-type: none"> <li>- tricalcium arsenate for control of <i>Poa annua</i></li> <li>- sodium arsenate for use in the treatment of lumber for protection against termites and decay-producing fungi</li> <li>- calcium acid methanearsonate (CMA)</li> </ul> </li> </ul>

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**REGULATORY  
REQUIREMENTS:**

**REVIEWER CHECKS:  
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<p><b>PM.5.3.CT.</b> Specific pesticides are restricted to certain uses (Conn. Agencies Regs. 22a-66-2(b) and (c)).</p>	<ul style="list-style-type: none"> <li>- monosodium methanearsonate (MSMA)</li> <li>- disodium methanearsonate (DSMA, MAA)</li> <li>- ammonium methanearsonates</li> <li>- cacodylic acid and its sodium salt</li> <li>- benzene hexachloride (BHC)</li> <li>- cadmium products</li> <li>- dichloro diphenyl dichloroethane (DDD)</li> <li>- dichloro diphenyl trichloroethane (DDT)</li> <li>- dodecachlorooctahydro-1,3,4-metheno-1H-cyclobuta (cd) pentalene (Mirex)</li> <li>- lead products</li> <li>- mercury products (except inorganic mercury products used on golf courses for control of winter turf diseases)</li> <li>- phosphorous paste products</li> <li>- selenium products</li> <li>- terpene polychlorinates (65 or 66 percent chlorine) consisting of chlorinated camphene, pinene, and related polychlorinates (Strobane)</li> <li>- thallium products</li> <li>- toxaphene.</li> </ul> <p>Verify that the following pesticides are used only for the listed purpose and are registered:</p> <ul style="list-style-type: none"> <li>- aldrin for use as a termite control</li> <li>- dieldrin for use as a termite control</li> <li>- lindane for leafminer, bark beetle, powder post beetle, or borer control; for prescribed use on humans by a licensed physician; or for prescribed use on animals by a licensed veterinarian</li> <li>- endrin for use as a mouse control in commercial orchards</li> <li>- sodium fluoride for use as a wood preservative</li> <li>- strychnine for use as a rat and mouse control</li> <li>- heptachlor to control subterranean termites when the method involves soil injection, trench application, or other soil incorporation method of application.</li> </ul> <p>Verify that the following pesticides are not used for the following purposes:</p> <ul style="list-style-type: none"> <li>- any pesticide activated by thermal means, except pyrethrum, pyrethrins, or pyrethroids, for indoor application, except indoor application for agricultural purposes</li> <li>- captan on pest or other animals</li> <li>- chlordane products for the following applications: <ul style="list-style-type: none"> <li>- indoor applications except by licensed applicators</li> <li>- on pets or other animals except by licensed veterinarians</li> <li>- indoor or outdoor application by mistblowers and other mist generators or thermal foggers</li> </ul> </li> </ul>
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>Sodium Fluoroacetate</b></p> <p><b>PM.5.4.CT.</b> The application and use of sodium fluoroacetate is specially restricted (Conn. Gen. Stat. 441-22a-66y) [Citation Revised October 1997].</p>	<ul style="list-style-type: none"> <li>- any antifouling paint or other substance containing a tributyltin compound for use or application on vessels or other structures or equipment in fresh water or the marine environment, except as follows:</li> <li>- may distribute or sell any paint with a release rate equal to or less than 4.0 micrograms/cm<sup>2</sup>/day to the owner or agent of a commercial boatyard</li> <li>- the owner or agent of a commercial boatyard may possess and apply or purchase for application any paint with a release rate equal to or less than 4.0 micrograms/cm<sup>2</sup>/day, if such paint is applied only with the commercial boatyard and one of the following is true: <ul style="list-style-type: none"> <li>- it is applied to vessels exceeding 25 m in length</li> <li>- it is applied to aluminum hulls</li> <li>- the paint meets all of the following criteria: <ul style="list-style-type: none"> <li>- it is in a spray can of 16 oz or less</li> <li>- it is commonly referred to as an outboard or lower drive unit paint and labeled for such purpose</li> <li>- it has a release rate equal to or less than 4.0 micrograms/cm<sup>2</sup>/day.</li> </ul> </li> </ul> </li> </ul> <p>Verify that all personnel who use or have sodium fluoroacetate in their possession have specific written permission from the Commissioner for each application.</p> <p>Verify that each operator who applies sodium fluoroacetate is trained and supervised by a person registered with the Commission.</p> <p>Verify that sodium fluoroacetate is used only at military establishments and on ships, not in dwellings.</p> <p>Verify that when used for rat control purposes, sodium fluoroacetate is colored with a Nigrosine black dye.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>PESTICIDE APPLICATION</b></p> <p><b>PM.10. General</b></p> <p><b>PM.10.1.CT.</b> Pesticide use must meet safe management standards (Conn. Gen. Stat. 441-22a-61(b)(1), and 441-22a-61(f)(1)(A), (D), and (E)) [Citation Revised October 1997].</p> <p><b>PM.10.2.CT.</b> Pesticide use must meet requirements to prevent water contamination (Conn. Agencies Regs. 22a-66-3(b) through (d)).</p> <p><b>PM.10.3.CT.</b> Installations/CW facilities making outdoor pesticide applications within 100 yd of any property line must meet notification requirements (Conn. Agencies Regs. 22a-66a-1(b)) [Revised October 1997].</p>	<p>Verify that personnel do not:</p> <ul style="list-style-type: none"> <li>- detach, alter, deface, or destroy any labeling required under FIFRA</li> <li>- use a pesticide in a manner inconsistent with the registered labeling or with state or Federal restrictions</li> <li>- operate faulty or unsafe equipment</li> <li>- apply a pesticide in a faulty, careless, or negligent manner.</li> </ul> <p>Verify that all hoses used to draw water from a water supply have an anti-siphoning device or check valve if a reversal of flow would cause any pesticide to enter into the hose.</p> <p>Verify that the discharge side of a pump is not connected to any water system.</p> <p>Verify that all filler hoses used as the intake in drawing water from water courses are covered except when in use, to prevent pesticide contamination.</p> <p>Verify that no water to be used in pesticide applications is drawn from any stream or pond leading to a potable water supply reservoir.</p> <p>Verify that the installation/CW facility posts signs notifying the public of the pesticide application at each conspicuous point of entry and at conspicuous locations of road frontage of the treated property.</p> <p>Verify that signs posted along road frontage face the road and are no farther than 150 ft. apart.</p> <p>Verify that signs posted at a point of entry face the direction of persons as they enter the property.</p> <p>Verify that the signs meet the following criteria:</p> <ul style="list-style-type: none"> <li>- the bottom of the sign is at least 12 in. above the ground</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>PM.10.4.CT.</b> Pesticide application to golf courses requires specific signage (Conn. Agencies Regs. 22a-66a-1(d)).</p>	<ul style="list-style-type: none"> <li>- the top of the sign is no higher than 48 in. above the ground</li> <li>- signs posted at the property boundary are located in either of the following positions: <ul style="list-style-type: none"> <li>- between 2 and 5 ft from the sidewalk</li> <li>- if there is no sidewalk, between 2 and 5 ft from the road</li> <li>- if there is no road, between 2 and 5 ft from the property boundary</li> <li>- in an alternative position that is conspicuous and easily read by adults and children if landscaping or other conditions would make the sign inconspicuous</li> </ul> </li> <li>- is a minimum of 4 in. high by 5 in. wide</li> <li>- is of a rigid material substantial enough to be easily read for at least 24 h after the application despite adverse weather conditions</li> <li>- is professionally printed except for the date, name, and telephone number of the applicator which may be handwritten if done in permanent ink and easy to read.</li> </ul> <p>Verify that signs contain the following information in black lettering on a bright yellow background:</p> <ul style="list-style-type: none"> <li>- <b>PESTICIDE APPLICATION</b> in bold letters of at least 36 point type</li> <li>- the symbol of a circle at least 2 in. in diameter with a diagonal slash over a person, child, and dog</li> <li>- the statement, "Pesticide applied on (date) by (name and telephone number of the pesticide application business, or the words property owner if the application is made by the property owner)," in at least 12 point type</li> <li>- the statement, "This sign must remain for 24 hours after pesticide application," in at least 12 point type.</li> </ul> <p>Verify that no one removes or renders difficult to read, in whole or in part, any posted pesticide application sign within 24 h after the application to which it applies.</p> <p>Verify that personnel applying pesticides to a golf course first post a sign not more than 24 h before applying pesticides.</p> <p>Verify that signs are posted at conspicuous places at the point of registration in the clubhouse and at the first tee notifying the public of the application.</p> <p>Verify that golf courses with more than 9 holes have signs posted at the first tee of each 9 holes.</p> <p>Verify that, if the location of the first tee differs for men and women, that signs are posted at both tees.</p>

**COMPLIANCE CATEGORY:  
PESTICIDE MANAGEMENT  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>PM.10.5.CT.</b> Pesticide applications to lakes and ponds must be in accordance with notification and signage requirements (Conn. Gen. Stat. 441-22a-66(g) and Conn. Agencies Regs. 22a-66a-1(e)(1) through (4)) [Added October 1997].</p>	<p>Verify that the bottom of each sign is at least 40 in. above the ground and the top of the sign is not more than 60 in. above the ground.</p> <p>Verify that no person removes or renders difficult to read within 24 h after the pesticide application any information that is required to be posted.</p> <p>Verify that signs meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are at least 12 in. high by 12 in. wide</li> <li>- are of rigid material substantial enough to be easily read for at least 24 h after the pesticide application despite adverse weather conditions</li> <li>- contain the statement <b>PESTICIDE APPLICATION WITHIN LAST 24 HOURS</b> in bold letters at least 1 in. high</li> <li>- contain the statement, "Contact for more information," in letters at least three-quarters of an inch high.</li> </ul> <p>(NOTE: The (blank) space must contain the name or names of the person at the golf course to contact for more information on the pesticide application.)</p> <p>Verify that each sign specifies in letters at least one-half inch high, the tees, greens, fairways, and other areas on the golf course to which pesticides have been applied within the preceding 24 h or will soon be applied.</p> <p>Verify that, prior to making a pesticide application in any lake or pond with public access:</p> <ul style="list-style-type: none"> <li>- notice of the application is published in a newspaper of general circulation in each municipality on which the lake or pond is located</li> <li>- signs are posted notifying the public of the pesticide application at each conspicuous point of public access.</li> </ul> <p>Verify that pesticide application is not made prior to the date specified in the published notice.</p> <p>Verify that, if the actual date of pesticide application will exceed the estimated date of application by more than three calendar days, the notice is republished.</p> <p>Verify that the bottom of each sign is posted a minimum of 40 in. above the ground and the top no higher than 60 in. above the ground.</p> <p>Verify that signs are not removed and that no mandatory information is rendered difficult to read until the end of the longest waiting period</p> <p>Verify that the sign is a minimum of 8.5 in. high by 11 in. wide.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
	<p>Verify that the sign is of a rigid material substantial enough to be easily read for at least the longest waiting period.</p> <p>Verify that the signs contain the following information in black lettering on a bright yellow background:</p> <ul style="list-style-type: none"> <li>- CAUTION in bold print of at least thirty-six point type, followed by, LAKE TREATED WITH PESTICIDES in bold print of at least twenty-four point type</li> <li>- the common name of each pesticide applied in bold print of at least twenty point type</li> <li>- the date and time of the application in bold print of at least twenty point type</li> <li>- the applicator's name and telephone number in bold print of at least twenty point type</li> <li>- the statement, "Do not use the water for the following purpose(s) until the date and time noted below:" in at least eighteen point type, followed by the dates and times that swimming and other water-contact activities, drinking, fishing, irrigation, livestock watering and other uses specified on the pesticide label or pesticide use permit may be resumed, according to the label and permit, whichever is more stringent (If the label and permit are silent as to when a certain activity may be resumed, use the words "No Restriction" for that activity. Nothing prohibits a pesticide application business, department, agency or institution from placing more stringent water use restrictions on the notice than are required by the label and permit.)</li> <li>- the statement, "This sign must remain posted until the latest date above" in bold print of at least twenty-four point type.</li> </ul> <p>(NOTE: Except for the date and time of the pesticide application, the name and telephone number of the pesticide application business or other person that applied the pesticide, and the end of each waiting period, the information required on the sign must be professionally printed. The remaining information may be handwritten, provided it is in permanent ink and in a print that is easy to read.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PESTICIDE APPLICATION</b></p> <p><b>PM.20.</b> <b>Agriculture</b></p> <p><b>PM.20.1.CT.</b>      Specific requirements must be met when using microencapsulated methyl parathion (Conn. Agencies Regs. 22a-66-2b).</p>	<p>Verify that microencapsulated methyl parathion is not used except to control San Jose scale in orchards or, from 1 January through 30 June, inclusive, to control first generation European corn borer on sweet corn.</p> <p>Verify that, prior to applying the pesticide, the applicator ensures that the field or orchard being treated, and any bordering area subject to drift, is as free of flowering ground cover as possible by mowing, use of herbicide, or other techniques.</p>



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**REGULATORY  
REQUIREMENTS:**

**REVIEWER CHECKS:  
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**PESTICIDE  
APPLICATION**

**PM.25.  
Aerial**

**PM.25.1.CT.** Installations/  
CW facilities applying pesti-  
cides by air must meet spe-  
cific application requirements  
(Conn. Agencies Regs. 22a-  
66-7(a) through (c), (e), and  
(g)(1)).

Verify that a permit is acquired prior to applying pesticides or fertilizers from the air.

Verify that no pesticide is applied from the air to a tract of land less than 10 acres in size unless the tract of land to be treated is part of a larger parcel that is at least 10 acres in size.

Verify that no pesticidal dust is applied within 100 ft of a public highway.

Verify that no pesticide is applied from the air for agricultural purposes with 200 ft of a watercourse, pond, or lake.

Verify that, for the aerial application of pesticides and fertilizers other than *Bacillus thuringiensis* (Bt), a written release is acquired from any landowner or resident whose property is under the spray pattern of the aerial application or subject to drift from the application.

(NOTE: The area subject to drift will be considered to be a minimum of 200 ft from the flight path of a helicopter and 300 ft from the flight path of a fixed-wing aircraft.)

**PM.25.2.CT.** Installations/  
CW facilities applying Bt by  
air must take specific notifi-  
cation steps (Conn. Agencies  
Regs. 22a-66-7(g)(2)).

Verify that the installation/CW facility notifies each landowner or resident whose property is under the spray pattern of an aerial application or subject to drift from the application at least 31 days prior to the proposed date of spraying.

(NOTE: The area subject to drift will be considered to be a minimum of 200 ft from the flight path of a helicopter and 300 ft from the flight path of a fixed-wing aircraft.)

Verify that the notice is in writing and states the following:

- proposed date or dates on which spraying is to occur
- name of the pesticide to be sprayed
- name of the permit applicant

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<b>REGULATORY REQUIRMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
	<ul style="list-style-type: none"> <li>- name of the applicator, if known</li> <li>- in what manner, to whom, and at what address the landowner or resident is to object to such spraying if he or she desires</li> <li>- the time limit within he or she must object</li> <li>- that if no objection is made, the area will be sprayed.</li> </ul> <p>Verify that, at the end of the objection period, the installation/CW facility forwards to the Commissioner the following information:</p> <ul style="list-style-type: none"> <li>- all objections received</li> <li>- list of those landowners or residents who have consented, those who have objected, and those who have not responded</li> <li>- proof that all landowners or residents have received written notice.</li> </ul> <p>(NOTE: Bt may not be applied from the air if a landowner or resident whose property is under the spray pattern or subject to drift from the application objects, in writing, to the permit application within 30 days of the date notification was received.)</p>

COMPLIANCE CATEGORY: PESTICIDE MANAGEMENT Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS: October 1997
<p><b>PESTICIDE APPLICATION</b></p> <p><b>PM.35.</b> Other</p> <p><b>PM.35.1.CT.</b> Chemical applications to waters of the state must be permitted (Conn. Agencies Regs. 22a-66z-1) [Revised October 1997].</p>	<p>Verify that a permit is acquired from the Commission of Environmental Protection before beginning any chemical applications to waters of the state for the control of aquatic vegetation, fish populations, or other aquatic organisms.</p>

<b>COMPLIANCE CATEGORY:</b> <b>PESTICIDE MANAGEMENT</b> <b>Connecticut Supplement</b>	
<b>REGULATORY</b> <b>REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PESTICIDE APPLICATION</b></p> <p><b>PM.40.</b> <b>Documentation</b></p> <p><b>PM.40.1.CT.</b> Commercial applicators must maintain pesticide application records (Conn. Gen. Stat. 441-22a-58(d)) [Citation Revised October 1997].</p>	<p>Verify that commercial applicators maintain records of their use and supervision of pesticide use, including the following:</p> <ul style="list-style-type: none"> <li>- the name and certification number of the commercial supervisor and the commercial operator</li> <li>- the kind and amount of pesticide used</li> <li>- the date and place of application</li> <li>- the target pest</li> <li>- the crop or site treated.</li> </ul> <p>Verify that a summary of the name and certification number of the commercial supervisor and the commercial operator, and the kind and amount of pesticide used is submitted to the Commissioner by 31 January of each year.</p>

<b>COMPLIANCE CATEGORY:</b> <b>PESTICIDE MANAGEMENT</b> <b>Connecticut Supplement</b>	
<b>REGULATORY</b> <b>REQUIRMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PM.55.</b> <b>DISPOSAL</b></p> <p><b>PM.55.1.CT.</b> Disposal of pesticides and pesticide containers must meet specific requirements (Conn. Agencies Regs. 22a-65-1).</p>	<p>Verify that the installation/CW facility does not discard any pesticide or pesticide container in such a manner as to cause pollution of any waterway or endanger plant and animal life or the public health and safety.</p> <p>Verify that no pesticides are discarded into any public sewage disposal system</p>

## Appendix 7-1

### Restricted and Permit Use Pesticides

(Source: State of Connecticut Department of Environmental Protection [Revised October 1997])

**Legend for Type of Use:**

RU = Restricted Use

AQ = Aquatic Permit Use

PU = Special Permit Use

AQ & GU = Aquatic Use & General Use (For Non-Aquatic Applications)

AQ & RU = Aquatic Use & Restricted Use (For Non-Aquatic Applications)

WHSE = Warehousing For Out Of State Sale Only

Vet = Veterinarian Use

Product Name	EPA No.	Class	Company Name
Disyston Systemic Granules	4-153-8590	RU	Agway Inc. % Universal Coops
60/40 Creosote-Coal Tar Solution	61468-3	RU	Koppers Industries
7.5 Methyl Parathion	5905-414	RU	Helena Chemical Co.
Aatrex 4L	100-497	RU	Novartis Crop Prot.Inc
Aatrex Nine-O	100-585	RU	Novartis Crop Prot.Inc
Abate 1-SG Insecticide	241-174	AQ	American Cyanamid Co.
Abate 2-CG Insecticide	241-151	AQ	American Cyanamid Co.
Abate 4-E Insecticide	241-132	AQ	American Cyanamid Co.
Abate 5-CG Insecticide	241-151	AQ	American Cyanamid Co.
Access	62719-057	RU	Dowelanco
Acclaim IEC	45639-172	RU	Agrevo Usa Co.
Acclaim IEC	45639-172	RU	Agrevo Usa Co.
Acclaim Herbicide	8340-18-54382	RU	Hoechst-Roussel Vet Co.
Acephate Pro PCO	51036-237	RU	Micro Flo Co.
ADZ-Life	3008-13	RU	Osmose Wood Preserving Inc.
ADZ-Pad	3008-53	RU	Osmose Wood Preserving Inc.
Agri-Mek 0.15 EC	618-98	RU	Merck & Co.
Agri-Mek 0.15EC Niticd/Insecticd	618-98	RU	Merck & Co.
Airdevil RS'L Insect w/Cypermthrn	9444-128	RU	Waterbury Companies Inc.
Algae Pro	55146-42-67690	AQ	Sepro
Algae-Rhap Cu-7 Liq Coppr Algaec	55146-42	AQ	Agtrol Chemical Products
All Pro Diazinon 4E Insecticide	769-687	RU	Sureco Inc.
All Pro Diazfrom AG500	769-689	RU	Sureco Inc.
All Pro Dursban 2E Insecticide	769-641	RU	Sureco Inc.
All Pro Dursban 4E Insecticide	769-699	RU	Sureco Inc.
Alumacoat	8120-49-60061	RU	Ameron Marine Coatings
Alumacoat II	60061-80	RU	Kop-Coat Inc.
Amercoat 635 Antifouling	8120-49	RU	Ameron Marine Coatings

Product Name	EPA No.	Class	Company Name
Amercoat 698HS Antifouling	8120-48	RU	Ameron Marine Coatings
Ammo 2.5 EC Insecticide	279-3127	RU	FMC Corp, Ag Chem Div.
Aqua Kleen Brnd Gran Aquatic Herb	264-109	AQ	Rhone-Poulenc Ag Co.
Aquacure Aquatic Algaecide	1813-307-2217	AQ	PBI/Gordon Co.
Aquacure Aquatic Herbicide	1813-312-2217	AQ	PBI/Gordon Co.
Aquathol Granular	4581-201	AQ	Elf Atochem North America Inc.
Aquathol K	4581-204	AQ & RU	Elf Atochem North America Inc.
Asana XL Insecticide	352-515	RU	Dupont & Co. - Ag Prod.
Astro 25WP Ornamental Insecticide	279-3051-538	RU	Scotts Co.
Astro 3.2EC Ornamental Insecticide	279-3014-538	RU	Scotts Co.
Astro T&O 25 WP Insecticide	279-3051	RU	FMC Corp, Ag Chem Div.
Astro T&O 3.2 EC Insecticide	279-3014	RU	FMC Corp, Ag Chem Div.
Atrazine 4L	19713-11	RU	Drexel Chemical Co.
Atrazine 4L	9779-255	RU	Riverside/Terra Corp.
Atrazine 4L	5905-470-38167	RU	Setre Chemical Co.
Atrazine 4L Herbicide	34704-69	RU	Platte Chemical Co.
Atrazine 90 WDG	34704-622	RU	Platte Chemical Co.
Atrazine 90DF	9779-253	RU	Riverside/Terra Corp.
Atrazine 90DF Herbicide	35915-3-60063	RU	Sostram Corp. % L. Watson
Attrex Accu-Pak	100-756	RU	Novartis Crop Prot. Inc.
Avitrol Conc	11649-10	RU	Avitrol Corp.
Avitrol Corn Chops	11649-6	RU	Avitrol Corp.
Avitrol Double Strgth Corn Chops	11649-5	RU	Avitrol Corp.
Avitrol Double Strgth Whole Corn	11649-8	RU	Avitrol Corp.
Avitrol FC Corn Chops - 99	11649-12	RU	Avitrol Corp.
Avitrol Mixed Grains	11649-4	RU	Avitrol Corp.
Avitrol Powder Mix	11649-11	RU	Avitrol Corp.
Avitrol Whole Corn	11649-7	RU	Avitrol Corp.
Azinphos-M 2EC Agric'l Insecticide	46077-8-34704	RU	Platte Chemical Co.
Azinphos-H 50W Agric'l Insecticide	46077-7-34704	RU	Platte Chemical Co.
Azinphosmethyl 2EC	51036-76	RU	Micro Flo Co.
Azinphosmethyl 50W	51036-164	RU	Micro Flo Co.
Azinphosmethyl 50W Soluble	51036-164	RU	Micro Flo Co.
Banrot 40 WP	58185-10	RU	Scotts-Sierra Crop Protection Co.
Banrot 40 WP	58185-10	RU	Scotts-Sierra Crop Protection Co.
Basamid Granular Soil Fomigant	7969-99	RU	BASF Corp.
Battle CS	10182-381-10404	RU	Lesco Inc.
Battle GC	10182-400-10404	RU	Lesco Inc.
Baygon 70 WP	3125-146	RU	Bayer Corp. Agric. Div.

Product Name	EPA No.	Class	Company Name
Baythroid 2	3125-351	RU	Bayer Corp. Agric. Div.
Bicep	100-645	RU	Novartis Crop Prot. Inc.
Bicep II	100-710	RU	Novartis Crop Prot. Inc.
Bicep Lite	100-731	RU	Novartis Crop Prot. Inc.
Bicep Lite II	100-766	RU	Novartis Crop Prot. Inc.
Biflex TC Termiticide	279-3112	RU	FMC Corp, Ag Chem Div.
Biomist 31 & 66 ULV	8329-43	RU	Clarke Mosquito Control Prod Inc.
Black Creosote Coal Tar Solution	363-14	RU	Coopers Creek Chemical Corp.
Bladex 4L Herbicide	352-470	RU	Duport & Co. - Ag Prod.
Bladex 90DF Herbicide	352-495	RU	Duport & Co. - Ag Prod.
Blue Ribbon Diazinon AG500	8590-456-39867	RU	Agway Inc. % Universal Coops
Blue Ribbon Paraquat Plus	239-2186-39867	RU	Agway Inc. % Universal Coops
Bro-Mean C-2PRE	5785-22-37733	RU	Reddick Fumigants Inc.
Bro-Mean C-O	5785-11 -37733	RU	Reddick Fumigants Inc.
Brom-O-Gas	5785-4	RU	Great Lakes Chemical Co.
Brom-O-Gas 0.25%	5785-55	RU	Great Lakes Chemical Co.
Broh-O-Gas 2%	5785-42	RU	Great Lakes Chemical Co.
Bullet Herbicide	524-418	RU	Monsanto Agricultural Co. C2SF
Busan 1020	1448-85	RU	Buckman Laboratories Inc.
Busan 1236	1448-361	RU	Buckman Laboratories Inc.
Cal-Clor	58185-1	RU	Scotts-Sierra Crop Protection Co.
Cal-Clor	58185-1	RU	Scotts-Sierra Crop Protection Co.
Calo-Gran	58185-4	RU	Scotts-Sierra Crop Protection Co.
Calo-Gran	58185-4	RU	Scotts-Sierra Crop Protection Co.
Carzol SP in WSP	45639-163	RU	Agrevo Usa Co.
Catalyst Emuls'd Water Insecticide	2724-450	RU	Sandoz Agro Inc.
CB Totl Release Pco Fogr w/Vapona	9444-32	RU	Waterbury Companies Inc.
Chipco Hocap10G GC Nema/Insectc	264-546	RU	Rhone-Poulenc Ag Co.
Chlor-O-Pic	5785-17	RU	Great Lakes Chemical Co.
Chlorguard Lo Insecticide	279-3132	RU	FMC Corp, Ag Chem Div.
Chlorpyrifos Pro 2	51036-152	RU	Micro Flo Co.
Chlorpyrifos Pro 4 Insecticide	51036-154	RU	Micro Flo Co.
Chlorpyrifos Pro Termite Conc	51036-122	RU	Micro Flo Co.
Classic Yacht #625 Clear	55363-5	RU	ITW Philadelphia Resins Corp.
Co-Ral 25%	11556-21	RU	Bayer Inc. Animal Health Div.
Co-Ral Eli	11556-23	RU	Bayer Inc. Animal Health Div.
Co-Ral Flowable	11556-98	RU	Bayer Inc. Animal Health Div.
Coal Tar Creosote	61468-5	RU	Koppers Industries
Coal Tar Creosote	61468-1	RU	Koppers Industries



Product Name	EPA No.	Class	Company Name
Commodore WP Insctcd Wtr Sol. Pck	10182-00342	RU	Zeneca Ag Products
Commodore WP Insecticide	10182-00282	RU	Zeneca Ag Products
Commodore WP Perimpk Wtr Sol. Pck	10182-00342-00000	RU	Zeneca Ag Products
Confront	62719-092	RU	Dowelanco
Conquer W.P.	1021-1636-57076	RU	Paragon Prof. Products
Contour Herbicide	241-353	RU	American Cyanamid Co.
Cop-R-Plastic Wood Preserv Cmpnd	3008-55	RU	Osmose Wood Preserving Inc.
Counter CR Nema'cide Lock'nload	241-314	RU	American Cyanamid Co.
Counter CR Sys.Nema'cide	241-314	RU	American Cyanamid Co.
Countr 15G Sy.Nema'cide Lck'nload	241-238	RU	American Cyanamid Co.
Countr 15G Sys.Nema'cide	241-238	RU	American Cyanamid Co.
Countr 20CR Sys.Nema'cide	241-314	RU	American Cyanamid Co.
Countr Sys.Insecticide Nematicid	241-238	RU	American Cyanamid Co.
Countr Sys.Nematicide Lock'nload	241-238	RU	American Cyanamid Co.
Countr20CR Sy.Nema'cide Lck'nload	241-314	RU	American Cyanamid Co.
Creosote Oil	218-609	RU	Allied Signal Corp.
Creosote Oil 24CB	218-132	RU	Allied Signal Corp.
Creosote-Coal Tar Solution	218-136	RU	Allied Signal Corp.
Crusade 5-G Orn'l Turf Insecticd	10182-00209-00000	RU	Zeneca Ag Products
Cube Powder	6458-6	AQ & RU	Foreign Domestic Chem. Corp.
Cy-pro 4L	1812-366	RU	Griffin Corp.
Cy-pro at 90DF Herbicide	1812-365	RU	Griffin Corp.
Cy-pro at 4L Herbicide	1812-367	RU	Griffin Corp.
Cy-pro at DF Herbicide	1812-368	RU	Griffin Corp.
Cycle	100-716	RU	Novartis Crop Prot. Inc.
Cynoff 50 WP Insecticide	279-3108	RU	FMC Corp, Ag Chem Div.
Cynoff 50 WSB Insecticide	279-3117	RU	FMC Corp, Ag Chem Div.
Cynoff EC Insecticide	279-3081	RU	FMC Corp, Ag Chem Div.
Cynoff Power Spray Insecticide	279-3070	RU	FMC Corp, Ag Chem Div.
Cynoff WP Insecticide	279-3070	RU	FMC Corp, Ag Chem Div.
Cynoff WSB	279-3085	RU	FMC Corp, Ag Chem Div.
Cyper-Active 2.0 EC	432-733	RU	Agrevo Environmental Health
Cyren 2E	67760-6	RU	Cheminova Inc.
Cyren 4E	67760-7	RU	Cheminova Inc.
Cyren TC	67760-10	RU	Cheminova Inc.
D.D.V.P..Five	655-536	RU	Prentiss Inc.
D.Z.N 2.0 MEC	100-649	RU	Novartis Crop Prot. Inc.
D.Z.N Diazinon 14G	100-469	RU	Novartis Crop Prot. Inc.
D.Z.N Diazinon 4E	100-463	RU	Novartis Crop Prot. Inc.

Product Name	EPA No.	Class	Company Name
D.Z.N Diazinon 50W	100-460	RU	Novartis Crop Prot. Inc.
D.Z.N Diazinon AG500	100-461	RU	Novartis Crop Prot. Inc.
D.Z.N Diazinon AG600 WBC	100-784	RU	Novartis Crop Prot. Inc.
Degesch Foni-Cels&Fuhi-Strips	40285-8	RU	Degesch America Inc.
Degesch Phostoxin Tblts	40285-1	RU	Degesch America Inc.
Degesch Phostoxin Tblts Prepac	40285-14	RU	Degesch America Inc.
Demand CS	10182-00361	RU	Zeneca Ag Products
Demand Pestab Insecticide	10182-387	RU	Zeneca Ag Products
Demon EC Insecticide	10182-00105	RU	Zeneca Ag Products
Demon TC Insecticide	10182-00107	RU	Zeneca Ag Products
Demon WP Insecticd Wtr Sol. Pkts	10182-00100	RU	Zeneca Ag Products
Demon WP Insecticide	10182-00071	RU	Zeneca Ag Products
Des-I-Cate	4581-206	RU	Elf Atochen North America Inc.
Desicate II	4581-381	RU	Elf Atochen North America Inc.
Di-Tox E	5602-97	RU	Hub States Corp.
Diazinon 14G	655-557	RU	Prentiss Inc.
Diazinon 4 E Insecticide	6720-191-4	RU	Bonide Products Inc.
Diazinon 4AG	9779-210	RU	Riverside/Terra Corp.
Diazinon 4E	655-457	RU	Prentiss Inc.
Diazinon 4E Insecticide	10370-39	RU	Agrevo Environmental Health
Diazinon 4S	655-462	RU	Prentiss Inc.
Diazinon 500 AG	34704-231	RU	Platte Chemical Co.
Diazinon 50W	51036-108	RU	Micro Flo Co.
Diazinon 50W	655-456	RU	Prentiss Inc.
Diazinon 50W Insecticide	100-460-34704	RU	Platte Chemical Co.
Diazinon AG 500	5905-248-38167	RU	Setre Chemical Co.
Diazinon AG-500	655-459	RU	Prentiss Inc.
Diazinon AG500	8590-456	RU	Agway Inc. % Universal Coops
Diazinon G-14	34704-230	RU	Platte Chemical Co.
Dibrom 8 Emulsive	59639-15	RU	Valent Usa Corp.
Dibrom Conc	59639-19	RU	Uniroyal Chemical Co.
Dimilin 25W	400-465	RU	Uniroyal Chemical Co.
Dimilin 25W	37100-8-400	RU	Uniroyal Chemical Co.
Dimilin 4L	37100-54-400	RU	Uniroyal Chemical Co.
Dimilin 4L	400-474	RU	Uniroyal Chemical Co.
Dipterex 80 SP	3125-184	RU	Bayer Corp. Agric. Div.
Diquat Herbicide	10182-00353	RU	Zeneca Ag Products
Ditrac Tracking Powder	12455-56	RU	Bell Laboratories Inc.
Dowelanco Suspend SC	432-763-62719	RU	Dowelanco

Product Name	EPA No.	Class	Company Name
Dragnet FT Termiticide	279-3062	RU	FNC Corp, Ag Chem Div.
Dragnet SFR Termit/Insecticide	279-3062	RU	FNC Corp, Ag Chem Div.
Dragon Lindane Borer Spray	19713-318-16	WHSE	Dragon Corp.
Dragon Thiodan Insect Spray	16-141	RU WHSE	Dragon Corp.
Dragon Thiodan Veg & Orn'l Dust	16-133	RU WHSE	Dragon Corp.
Drusban 50W IN	62719-072	RU	Dowelanco
Dual Use E.C.	4816-537	RU	Agrevo Environmental Health
Durat'n Pt275MC Dursban Liq Conc	499-419	RU	Whitmire Micro-Gen Labs Inc.
Dursban 2E	62719-065	RU	Dowelanco
Dursban 2E	655-466	RU	Prentiss Inc.
Dursban 4E	62719-011	RU	Dowelanco
Dursban 4E	655-499	RU	Prentiss Inc.
Dursban 4E Insecticide Spray	8590-556	RU	Agway Inc. % Universal Coops
Dursban 50W	62719-068	RU	Dowelanco
Dursban L.O.	62719-055	RU	Dowelanco
Dursban Plus	769-967-1057	RU	Rochester Midland
Dursban Pro	652719-166	RU	Dowelanco
Dursban TC	62719-047	RU	Dowelanco
Dursban TNP	34704-66-65783	RU	United Horticultural Supply
Dursban Turf	62719-035	RU	Dowelanco
Dursban* 4E-N	62719-254-65783	RU	United Horticultural Supply
Dycarb	58185-18	RU	Scotts-Sierra Crop Protection Co.
Dycarb 76WP	58185-18	RU	Scotts-Sierra Crop Protection Co.
Dyfonate II 15-G	10182-00187-00000	RU	Zeneca Ag Products
Dylox 80 Turf & Ornamental	3125-184	RU	Bayer Corp. Agric. Div.
Earthtec	64962-1	AQ	Earth Science Laboratories Inc.
Edge Insecticide/Herbicide	10182-00195-00000	RU	Zeneca Ag Products
Empire 20	62719-088	RU	Dowelanco
Endosulfan 50W Soluble	51036-91	RU	Micro Flo Co.
Endosulfan 50WP	51036-91	RU	Micro Flo Co.
Enforcer Overnite Pest Ctrl Conc	432-733-40849	RU	Enforcer Products Inc.
Equity	62719-167	RU	Dowelanco
Extrazine II 4L Herbicide	352-500	RU	Dupont & Co. - Ag Prod.
Extrazine III DF Herbicide	352-577	RU	Dupont & Co. - Ag Prod.
F-L Sys. Insecticide Granules	7401-26	RU	Voluntary Purchasing Groups
Ficam 2 1/2g	45639-150	RU	Agrevo USA Co.
Ficam W (Rup Ct)	45639-1	RU	Agrevo USA Co.
Firstline GTX Termite Bait Sta.	279-3171	RU	FMC Corp, Ag Chem Div.
Flee! Insecticide	279-3092	RU	FMC Corp, Ag Chem Div.

Product Name	EPA No.	Class	Company Name
Flurods	3008-63	RU	Osmose Wood Preserving Inc.
Foam-Coat Vaporooter	9993-2	RU	Airrigation Engineering Inc.
Ford's Diazinon 4E Insecticide	10370-39	RU	Agrevo Environmental Health
Formaldehyde	6035-47	RU	Vineland Labs. Affil. of IGI
Fulex DDVP Fumigator	1327-36	RU	Fuller System Inc.
Fulex Dithio Insecticidal Smoke	1327-38	RU	Fuller System Inc.
Fulex Nicotine Fumigator	1327-41	RU	Fuller System Inc.
Fulex Thiodan Insecticidal Smoke	1327-35	RU	Fuller System Inc.
Fultime Herbicide	10182-419	RU	Zeneca Ag Products
Fumitoxin Aluminum Phosphide Bag	5857-6	RU	Pestcon Systems Inc.
Fumitoxin Pellets	5857-2	RU	Pestcon Systems Inc.
Fuimitoxin Tblt	5857-1	RU	Pestcon Systems Inc.
Furadan 15 G	279-3023	RU	FMC Corp, Ag Chem Div.
Furadan 4 F	279-2876	RU	FMC Corp, Ag Chem Div.
Furdan 4F	279-2876-3125	RU	Bayer Corp. Agric. Div.
Gowan Azinphos 50 PVA	10163-180	RU	Gowan Co.
Gowan Azinphos-N 50 W	10163-148	RU	Gowan Co.
Gowan Azinphos-H 50 145b	10163-78	RU	Gowan Co.
Gran'lr Insecticide Diazinon 14G	8590-444	RU	Agway Inc. % Universal Coops
Guardzman	55947-150	RU	Sandoz Agro Inc.
Guthion 3 Flowable	3125-338	RU	Bayer Corp. Agric. Div.
H-Y Di-Syston Insecticd Granules	7401-323	RU	Voluntary Purchasing Groups
H-Y Diazinon 4E Insect Spray	100-463-7401	RU	Voluntary Purchasing Groups
H-Y Dursban 2E Spray	4122-68-7401	RU	Voluntary Purchasing Groups
H-Y Lindane Spray	7401-321	WHSE	Voluntary Purchasing Groups
H-Y Thiodan Garden Dust	7401-316	RU	Voluntary Purchasing Groups
H-Y Thiodan Garden & Orn'l Spray	11715-297-7401	RU	Voluntary Purchasing Groups
Harness 20G Herbicide	524-487	RU	Monsanto Agricultural Co. C2SF
Harness Herbicide	524-473	RU	Monsanto Agricultural Co. C2SF
Harness Plus EC Herbicide	524-473	RU	Monsanto Agricultural Co. C2SF
Harness Xtra 5.6L Herbicide	524-485	RU	Monsanto Agricultural Co. C2SF
Harness Xtra Herbicide	524-480	RU	Monsanto Agricultural Co. C2SF
Hempel's Antifouling Combic	10250-40	RU	Hempel Coatings USA Inc.
Hempel's Antifouling Combic	10250-40	RU	Hempel Coatings USA Inc.
Hollow Heart Conc	3008-8	RU	Osnose Wood Preserving Inc.
Hopkins Basamid Granular	2393-460	RU	Haco Inc.
Hopkins Fly Killer D	59639-18-2393	RU	Haco Inc.
Hopkins Zinc Phosphide Bait	2393-185	RU	Haco Inc.
Hopkins Zinc Phosphide Pellets	2393-521	RU	Haco Inc.

Product Name	EPA No.	Class	Company Name
HPX Resid. w/Cypermethrin	9444-182	RU	Waterbury Companies Inc.
Hydroblock	33068-1-10404	AQ	Lesco Inc.
Hydrothol 191	4581-174	AQ & RU	Elf Atochem North America Inc.
Hydrothol 191 Granular	4581-172	AQ	Elf Atochem North America Inc.
Inject A Cide	7964-10	RU	Mauget Co.
Inject A Cide AV	7964-15	RU	Mauget Co.
Inject A Cide B	7964-11	RU	Mauget Co.
Insecticide 4	538-162	RU	Scotts Co.
Interswift A/F BKA	2693-123	RU	Courtaulds Coatings
ISK-Fume	1022-562-50534	RU	ISK Biosciences Corp.
K-Tea	1812-307	AQ	Griffin Corp.
Kerb 50-W in Water Sol. Pack.	707-159	RU	Rohm & Haas Co. Ag. Chem Regis.
Kerb WSP T&O	704-159	RU	Rohm & Haas Co. Ag. Chem Regis.
Knockout	334-545-875	RU	Diverseylever
Knox Out GH	4581-379-1001	RU	Cleary Chem. Co.
Komeen	1812-312	AQ	Griffin Corp.
Laddok Herbicide	7969-54	RU	BASF Corp.
Laddok S-12 Herbicide	7969-100	RU	BASF Corp.
Lannate Insecticide	352-342	RU	Duport & Co. - Ag Prod.
Lannate L Insecticide	352-370	RU	Duport & Co. - Ag Prod.
Lannate LV Insecticide	352-384	RU	Duport & Co. - Ag Prod.
Lariat Flowable Herbicide	524-329	RU	Monsanto Agricultural Co. C2SF
Lasso Herbicide	524-314	RU	Monsanto Agricultural Co. C2SF
Lasso II Herbicide	524-296	RU	Monsanto Agricultural Co. C2SF
Lesco Battle WP	10182-360-10404	RU	Lesco Inc.
Lesco Crusade 5G	10182-209-10404	RU	Lesco Inc.
Lesco Cypro WP Insecticide	10182-71-10404	RU	Lesco Inc.
Lesco Diazinon AG 600 WBC	100-784-10404	RU	Lesco Inc.
Lescocide Plus Algaecide	08959-0010-10404	AQ	Lesco Inc.
Liberty Herbicide	45639-199	RU	Agrevo USA Co.
Maneb Thiodan 4.5-3D	8590-164	RU	Agway Inc. % Universal Coops
Marksman	55947-39	RU	Sandoz Agro Inc.
MBC Conc Soil Fumigant	8853-2	RU	Hendrix & Dail Inc.
MBC-33 Soil Fumigant	8853-3	RU	Hendrix & Dail Inc.
Mensurol 75% Wettable Powder	3125-288-10163	RU	Gowan Co.
Mensurol 75W	10163-231	RU	Gowan Co.
Metam 426	5481-423	RU	Amvac Chemical Corp.
Metam Sodium	5481-350	RU	Amvac Chemical Corp.
Metasystox-R 2 Orn'l Insecticide	10163-220	RU	Gowan Co.

Product Name	EPA No.	Class	Company Name
Metasystox-R Spray Conc	10163-220	RU	Gowan Co.
Meth-O-Gas	5785-41	RU	Great Lakes Chemical Co.
Meth-O-Gas 100	5785-11	RU	Great Lakes Chemical Co.
Meth-O-Gas Q	5785-41	RU	Great Lakes Chemical Co.
Methyl 4EC	67760-29	RU	Cheminova Inc.
Methyl Bromide 98	011220-17-8853	RU	Hendrix & Dail Inc.
Methyl Parathion 4E	34704-10	RU	Platte Chemical Co.
Methyl Parathion Technical	4787-28	MU	Cheminova Inc.
Micro-Tech Herbicide	524-344	RU	Monsanto Agricultural Co. C2SF
Micron 33	2693-115	RU	Courtaulds Coatings
Micron 33	2693-115	RU	Courtaulds Coatings
Milban	58185-12	RU	Scotts-Sierra Crop Protection Co.
Miracol II	8120-49-60061	RU	Ameron Marine Coatings
MITC-Fume	54289-2-3008	RU	Osnose Wood Preserving Inc.
Mocap 10% Gran Nema/Insecticide	264-465	RU	Rhone-Poulenc Ag Co.
Mocap 10% Gran Lcknload Nema/Insc	264-465	RU	Rhone-Poulenc Ag Co.
Monitor 4Spray	59639-56	RU	Valent USA Corp.
Mosquito Beater 2-2	4-389	RU	Bonide Products Inc.
Mosquito Beater 4-4	4-390	RU	Bonide Products Inc.
Mustang 1.5 EW Insecticide	279-3126	RU	FMC Corp, Ag Chem Div.
Nemacur 10% Turf & Ornamental	3125-237	RU	Bayer Corp. Agric. Div.
Nemacur 15% Granular	3125-236	RU	Bayer Corp. Agric. Div.
Nicotine	8241-9	RU	Plant Products Corp.
Noxfish Fish Toxicant	432-172	RU	Agrevo Environmental Health
Nusyn-Noxfish Fish Toxicant	432-550	RU	Agrevo Environmental Health
Oftanol 2	3125-342	RU	Bayer Corp. Agric. Div.
Oftanol 5% Granular	3125-30	RU	Bayer Corp. Agric. Div.
Omite 3WS	400-427	RU	Uniroyal Chemical Co.
Option IEC Herbicide	8340-18-54382	RU	Hoechst-Roussel Vet Co.
Orchard Mouse Bait	12445-17-8590	RU	Agway Inc. % Universal Coops
Orchard Mouse Bait	4-152	RU	Bonide Products Inc.
Orchard Muse Bait-Covered	8590-304	RU	Agway Inc. % Universal Coops
Ornamite	400-426	RU	Uniroyal Chemical Co.
Orthene PCO Formula II	59639-31	RU	Valent USA Corp.
Osmoplastic	3008-56	RU	Osmose Wood Preserving Inc.
Osmoplastic Wood Preserve Compnd	3008-68	RU	Osmose Wood Preserving Inc.
Partner Custom Blend Herbicide	524-403	RU	Monsanto Agricultural Co. C2SF
Partner WDG Herbicide	424-403	RU	Monsanto Agricultural Co. C2SF
Pathway	62719-031	RU	Dowelanco

Product Name	EPA No.	Class	Company Name
Penncap-M	4581-292	RU	Elf Atochem North America Inc.
Phaser 3EC	45639-169	RU	Agrevo USA Co.
Phaser 3EC	45639-169	RU	Agrevo USA Co.
Phaser 50 WP Insecticide	8340-49-54382	RU	Hoechst-Roussel Vet Co.
Phaser 50WSB	45639-194	RU	Agrevo USA Co.
Phaser 50WP	45639-194	RU	Agrevo USA Co.
Phaser 50WP	45639-194	RU	Agrevo USA Co.
Phaser Insecticide	8340-14-54382	RU	Hoechst-Roussel Vet Co.
Plantfume 103	8241-10	RU	Plant Products Corp.
Pole Wrap	3008-52	RU	Osmose Wood Preserving Inc.
Pondmaster Aquatic Algaecide	1813-307-2217	AQ	PBI/Gordon Co.
Pondmaster Aquatic Herbicide	1813-307-2217	AQ	PBI/Gordon Co.
Pounce 1.5 G	279-3059	RU	FMC Corp, Ag Chem Div.
Pounce WSB	279-3083	RU	FMC Corp, Ag Chem Div.
Pramitol 25E	100-443	RU	Novartis Crop Prot. Inc
Pramitol 25E	100-443-9779	RU	Riverside/Terra Corp.
Pramitol 25E Herbicide	100-443-34704	RU	Platte Chemical Co.
Pramitol 5 PS	100-479-34704	RU	Platte Chemical Co.
Pramitol 5PS	100-479	RU	Novartis Crop Prot. Inc
Prelude Termiticide/Insecticide	10182-00095-00000	RU	Zeneca Ag Products
Premise 0.5 SC Insecticide	3125-497	RU	Bayer Corp. Agric. Div.
Premise 75 Insecticide	3125-455	RU	Bayer Corp. Agric. Div.
Prenbay 1% Oil Solution	655-546	RU	Prentiss Inc.
Prenbay 1.5 EC	655-796	RU	Prentiss Inc.
Prentox Evict	100-785-655	RU	Prentiss Inc.
Prevail FT Termiticide	279-3082	RU	FMC Corp, Ag Chem Div.
Pro Grade Chlorpyrifos 2E Insect	51036-152	RU	Micro Flo Co.
Pro Grade Chlorpyrifos 4E Insect	51036-154	RU	Micro Flo Co.
Pro Grade Tri-plex Water Soluble	228-283	RU	Riverdale Chemical Co.
Pro Grade Triplx Sltv Brdlf Hrb	228-312	RU	Riverdale Chemical Co.
Professional Turf	62719-035	RU	Dowelanco
Prograss EC	45639-68	RU	Agrevo USA Co.
Prometon 25E	100-443	RU	Novartis Crop Prot. Inc
Prometon 5PS	100-479	RU	Novartis Crop Prot. Inc
Pryfon 6	3125-339	RU	Bayer Corp. Agric. Div.
Questor Lo Insecticide	279-3132	RU	FMC Corp. Ag Chem Div.
Ravap E.C. Livestk, Pltry & Premise	56493-42	RU	Fermenta Animal Health Co.
Reward Aquatic & Noncrop Herbicide	10182-404	AQ & RU	Zeneca Ag Products
Reward Aquatic & Noncrop Herbicide	10182-00353-00000	AQ & RU	Zeneca Ag Products

Product Name	EPA No.	Class	Company Name
Reward Landscape & Aquatic Herbicid	10182-404	AQ & RU	Zeneca Ag Products
Reward LS Landscape Herbicide	10182-404	RU	Zeneca Ag Products
Rid-A-Bird Perch 1100 Solution	7579-2	PU	Rid-A-Bird Inc.
Rigo Exotherm Termil	70-223	RU	Rigo Co. % Sureco
Rindall-Zinc Track'n Powder 4 Ctrl	7173-197	RU	Liphatech Inc.
Roban II Ag	7122-124	RU	Archem Co.
Roo-Pru Super Tri-Pak	64945-3	RU	Conness Co.
Rout	64898-4	RU	Florida Petrochemicals Inc.
Rozol Blue Tracking Powder	7173-172	RU	Liphatech Inc.
Rozol Tracking Powder	7173-113	RU	Liphatech Inc.
Saga WP Insecticide	432-755	RU	Agrevo Environmental Health
Sanafoam Vaporooter II	9993-3	RU	Airrigation Engineering Inc.
Scimitar CS Insecticide	10182-00381	RU	Zeneca Ag Products
Scimitar WP Insectcd Wtr. Sol. Pck	10182-00360	RU	Zeneca Ag Products
Scourge Insecticide 18+54%MF FII	432-667	RU	Agrevo Environmental Health
Scourge Insecticide 4+12%MF FII	432-716	RU	Agrevo Environmental Health
Scout Insecticide	34147-2-54382	RU	Hoechst-Roussel Vet Co.
Scout X-tra	34147-3-45639	RU	Agrevo USA Co.
Sea-cide	8123-37-70208	AQ	Drummond American Corp.
Sectagon 42	52251-43	RU	Or-Cal Chemicals
Shotgun Flowable Herbicide	34704-728	RU	Platte Chemical Co.
Simazine 4% Granules	72-289	RU	Miller Chem. & Fert. Corp.
Simazine 4L	9779-296	RU	Riverside/Terra Corp.
Simazine 90DF	9779-295	RU	Riverside/Terra Corp.
Sniper 2-E Azinphos Methyl Insect	34704-691	RU	Platte Chemical Co.
Sniper 50 PVA Azin. Methyl Insect	10163-180-34704	RU	Platte Chemical Co.
Sniper 50W Azinphos Methyl Insect	66222-11-34704	RU	Platte Chemical Co.
Sonar A.S.	62719-124	AQ	Dowelanco
Sonar A.S.	67690-4	AQ	Sepro
Sonar SRP	62719-123	AQ	Dowelanco
Sonar SRP	67690-3	AQ	Sepro
Starlicide Complete	67517-8-602	PU	Purina Mills Inc.
Subterfuge Termite Bait	341-371	RU	American Cyanimid Co.
Super Tin 4L	1812-244	RU	Griffin Corp.
Super Tin 80WP	1812-350	RU	Griffin Corp.
Supracide 2E	100-501	RU	Novartis Crop Prot. Inc.
Suspend SC Insecticide	432-763	RU	Agrevo Environmental Health
Systemic Granules	4-153	RU	Bonide Products Inc.
Systemic Granules w/DI-Syston	4-153	RU	Bonide Products Inc.



Product Name	EPA No.	Class	Company Name
Talstar GC Flowable Insect/Mite	279-3156	RU	FMC Corp, Ag Chem Div.
Talstar GC Granular Insecticide	279-3167	RU	FMC Corp, Ag Chem Div.
Talstar Ornamental Flowable	279-3155-538	RU	Scotts Co.
Talstar PL Granular Insecticide	279-3168	RU	FMC Corp, Ag Chem Div.
Tame 2.4 EC Spray	59639-77	RU	Valent USA Corp.
Telone C-17	62719-012	RU	Dowelanco
Telone II	62719-032	RU	Dowelanco
Temik 15G Aldicarb Pesticide	264-330	RU	Rhone-Poulenc Ag Co.
Tempo 20 Wettable Powder	3125-396	RU	Bayer Corp. Agric. Div.
Tempo 20 Wettable Powder In Pkts	3125-377	RU	Bayer Corp. Agric. Div.
Tempo 20 WP Golfcourse Insectici	3125-462	RU	Bayer Corp. Agric. Div.
Tempo 20 WP Turf & Ornamental	3125-396	RU	Bayer Corp. Agric. Div.
Tenure	62719-047	RU	Dowelanco
Terr-O-Gas 67	5785-24	RU	Great Lakes Chemical Co.
Terr-O-Gas 98	5785-22	RU	Great Lakes Chemical Co.
Thimet 15-G Soil & Sys. Insecticid	241-145	RU	American Cyanimid Co.
Thimet 15-G Soil & Sys. Lock'nload	241-145	RU	American Cyanimid Co.
Thimet 20-G Soil & Sys. Lock'nload	241-257	RU	American Cyanimid Co.
Thimet 20-G Soil & Sys. Insecticide	241-257	RU	American Cyanimid Co.
Thiodan 3 EC	279-2924	RU	FMC Corp, Ag Chem Div.
Thiodan 3D	8590-76	RU	Agway Inc. % Universal Coops
Thiodan 3E	8590-457	RU	Agway Inc. % Universal Coops
Thiodan 50W	8590-19	RU	Agway Inc. % Universal Coops
Thiodan T&O 3 EC Insecticide	279-2924	RU	FMC Corp, Ag Chem Div.
Thiodan T&O 50 WP Insecticide	279-1380	RU	FMC Corp, Ag Chem Div.
Thiodan WSB Insecticide	279-3129	RU	FMC Corp, Ag Chem Div.
Thirethrin	9779-330	RU	Riverside/Terra Corp.
Tiller EC Herbicide	45639-184	RU	Agrevo USA Co.
Timberlife Wood Preserv Compnd	3008-68	RU	Osmose Wood Preserving Inc.
Timberfume	3008-39	RU	Osmose Wood Preserving Inc.
Timberfume II	3008-46	RU	Osmose Wood Preserving Inc.
Timberlife	3008-56	RU	Osmose Wood Preserving Inc.
Timbor Insecticide	1624-39	RU	U.S. Borax % Delta Analytical
Topcide O/S	10182-417-400	RU	Uniroyal Chemical Co.
Topnotch Herbicide	10182-391	RU	Zeneca Ag Products
Tordon 101 W&B	62719-005	RU	Dowelanco
Tordon K	62719-017	RU	Dowelanco
Tordon RTU	62719-031	RU	Dowelanco
Total Release Insectcd w/Vapona	9444-32	RU	Waterbury Companies Inc.

Product Name	EPA No.	Class	Company Name
Tree & Shrub Spray	8590-309	RU	Agway Inc. % Universal Coops
Tri-Con 67/33	011220-07-8853	RU	Hendrix & Dail Inc.
Tri-Lux IIT	5204-64-2693	RU	Courtalds Coatings
Tribute Termit/Insecticide Conc.	432-767	RU	Agrevo Environmental Health
Trimec 959 Broadleaf Herbicide	2217-773	RU	PBI/Gordon Co.
Trimec 992 Broadleaf Herbicide	2217-656	RU	PBI/Gordon Co.
Trimec Classic DSC Bdleaf Herbcd	2217-789	RU	PBI/Gordon Co.
Trimec Encore Brdleaf Herbicide	2217-773	RU	PBI/Gordon Co.
Triumph	100-643	RU	Novartis Crop Prot. Inc.
Truban 25 EC	58185-8	RU	Scotts-Sierra Crop Protection Co
Truban 25% EC	58185-8	RU	Scotts-Sierra Crop Protection Co
Truevalue Greenthumb Dursban 1E	70-286-12140	RU	Black Leaf % Sureco
Trumpet EC Insecticide	59639-90	RU	Valent USA Corp.
Turcam 2 1/2G (RUP)	45639-100	RU	Agrevo USA Co.
Turcam 2 1/2G (RUP) Nor-Am Chem.	45639-100	RU	Agrevo USA Co.
Turfgo MEC Amine BG	34704-218-65783	RU	United Horticultural Supply
Turflon II Amine	62719-075	RU	Dowelanco
ULD -500 5% Vapona	11540-8	RU	Micro-Gen Equipment Corp.
Vapam	5481-466	RU	Amvac Chemical Corp.
Vapam	869-156	RU	Green Light Co.
Vapam HLSoil Fumgant	5481-468	RU	Amvac Chemical Corp.
Vapam Soil Fumgant	10182-00150	RU	Zeneca Ag Pproducts
Vapon 20%	655-492	RU	Prentiss Inc.
Vendex 4L Miticide	352-493	RU	DuPont & Co. - Ag Prod.
Vendex 50WP Miticide	352-480	RU	DuPont & Co. - Ag Prod.
Vikane Gas	62719-004	RU	Dowelanco
Vikor Insecticide Concentrate	432-733-10370	RU	Agrevo Environmental Health
Vikor XL Pest Control Conc.	432-733	RU	Agrevo Environmental Health
Vos - Ban	1769-233	RU	Certified Labs. Dic Nch Corp
Vydate L Insecticide/Nematicide	352-372	RU	DuPont & Co. - Ag Pfod.
Watrol	1769-174	RU	Chemsearch Div. Nch Corp.
Whip 1 EC Herbicide	8340-23-54382	RU	Hoechst-Roussel Vet Co.
Whitmire PT 1700 Methiocarb	499-276	RU	Whitmire Migro-Gen Labs Inc.
Woodfume	3008-33	RU	Osmose Wood Preserving Inc.
Woodfume Plus	3008-67	RU	Osmose Wood Preserving Inc.
Woolsey Miracol II	60061-80	RU	Kop-Coat Inc.
Zeocon Safrothin Emul. Conc. Insect	2724-314-50809	RU	Sandoz Agro Inc.
Zep Conc Hit Man Insecticide	432-567-1270	RU	Zep Manufacturing Co.
Zep Stop	1270-199	RU	Zep Manufacturing Co.

Product Name	EPA No.	Class	Company Name
Zinc Phosphide Corn Bait	61282-20	RU	Hacco Inc.
Ziran F4	4581-230	RU	Elf Atochem North America Inc.
Zoecon Altosid Briquets	2724-375-64833	AQ	Sandoz Agro Inc.
Zoecon Altosid Liq Larvicide Conc	2724-446-64833	AQ	Sandoz Agro Inc.
Zoecon Altosid Liq Lrv. Mosq. Rglr	2724-392-64833	AQ	Sandoz Agro Inc.
Zoecon Altosid Pellets	2724-448-64833	AQ	Sandoz Agro Inc.
Zoecon Altosid Xr Res'l Briquets	2724-421-64833	AQ	Sandoz Agro Inc.
ZP Rodent Bait Ag	12455-17	RU	Bell Laboratories Inc.
Zp Tracking Powder	12455-16	RU	Bell Laboratories Inc.

## SECTION 8

### PETROLEUM, OIL, AND LUBRICANT (POL) MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for POL Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Fleet Vehicle Compressed Natural Gas Automotive Service Stations* - that portion of a commercial, industrial, governmental, or manufacturing property where compressed natural gas used as fuel is stored and dispensed into the fuel tanks of motor vehicles that are used in connection with such businesses, by persons within the employ of such businesses (Regulations of Connecticut State Agencies (Conn. Agencies Regs.) 29-329-4 (Add) 1-5 (b)) [Added October 1997].
- *Residential Boiler* - any boiler that is used in whole or in part to heat a residential building (Conn. Agencies Regs. 22a-449(c)-100(c)).
- *Residential Building* - any house, apartment, apartment complex with four or fewer units, condominium complex with four or fewer units, cooperative complex with four or fewer units, trailer, mobile home, or other structure occupied by individuals as a dwelling (Conn. Agencies Regs. 22a-449(c)-100(c)).

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GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**REFER TO  
CHECKLIST ITEMS:**

**REFER TO  
PAGE NUMBERS:**

(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)

**Service Stations/Vehicle Maintenance**

Fleet Vehicle Service Stations

PO.45.1.CT. through PO.45.4.CT.

8-3

Compressed Natural Gas

PO.45.5.CT. through PO.45.15.CT.

8-4

Used Oil Burners

PO.80.1.CT.

8-8

Used Oil Marketing

PO.85.1.CT.

8-9

**COMPLIANCE CATEGORY:**  
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PO.45. SERVICE STATIONS/VEHICLE MAINTENANCE</b></p> <p><b>Fleet Vehicle Service Stations</b></p> <p><b>PO.45.1.CT.</b> Personnel using unattended fleet vehicle service station must be trained (Conn. Agencies Regs. 29-320-4a, 9-5.1.1) [Added October 1997].</p> <p><b>PO.45.2.CT.</b> Fleet vehicle service station dispensing area must be lighted (Conn. Agencies Regs. 29-320-4a, 9-5.1.2) [Added October 1997].</p> <p><b>PO.45.3.CT.</b> Warning signs must be posted at all fuel dispensing locations (Conn. Agencies Regs. 29-320-4a, 9-9) [Added October 1997].</p>	<p>(NOTE: The National Fire Protection Association, Inc., NFPA 30A-1993, Automotive and Marine Service Stations Code, is amended to meet the needs of Connecticut as follows in this checklist. (Conn. Agencies Regs. 29-320-4a).)</p> <p>(NOTE: This applies to persons or employees of a company, fleet, commercial, industrial, governmental or manufacturing establishment fueling a motor vehicle used in connection with such businesses at an unattended fleet vehicle service station not owned or operated by the person(s).)</p> <p>Verify that the owner of the fleet vehicle service station trains person(s) using the facility.</p> <p>Verify that evidence of training is documented and available for inspection.</p> <p>Verify that the training include as a minimum:</p> <ul style="list-style-type: none"> <li>- the proper operation of the dispensing equipment;</li> <li>- the location and operation of emergency remote system shutoff(s); and</li> <li>- emergency response procedures to follow in the event of leak, discharge or fire involving flammable or combustible liquids.</li> </ul> <p>Verify that fleet vehicle service station dispensing areas are suitably illuminated by a reliable light source when in use.</p> <p>Verify that warning signs with the words STOP MOTOR, NO SMOKING and NO OPEN FLAMES PERMITTED in English at least 1 in. in height with a contrasting margin are posted at all dispensing locations.</p> <p>Verify that signs are visible and legible from the point of liquid transfer into the motor vehicle.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p><b>PO.45.4.CT.</b> Warning signs must be posted when both liquid and gaseous motor fuels are dispensed (Conn. Agencies Regs. 29-320-4a, 9-10.1) [Added October 1997].</p>	<p>Verify that warning signs identifying the type of motor fuel are posted at all dispensing devices where both liquid and gaseous motor fuels are dispensed into the fuel tanks of motor vehicles.</p> <p>(NOTE: Gaseous motor fuels include compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG).)</p> <p>Verify that each warning sign is at least 3 ft above adjacent ground level and identify the fuel in English in letters at least 3 1/2 in. in height with a contrasting color margin.</p> <p>Verify that signs are marked as follows:</p> <ul style="list-style-type: none"> <li>- the common name of a flammable liquid, such as GASOLINE, appears in white letters with a red background</li> <li>- the common name of a combustible liquid, such as DIESEL FUEL or KEROSENE, appears in white letters with a green background</li> <li>- COMPRESSED NATURAL GAS, appears in black letters with a yellow background.</li> <li>- LIQUEFIED NATURAL GAS, appears in black letters with a yellow background.</li> <li>- LIQUEFIED PETROLEUM GAS or PROPANE, is centered in black letters and appears with a yellow background.</li> </ul> <p>(NOTE: The name of the fuel must not be abbreviated. The contrasting margin must be at least 2 in. from the letters.)</p>
<p><b>Compressed Natural Gas (CNG)</b></p>	<p>(NOTE: The National Fire Protection Association, Inc., NFPA 52-1992, Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, is amended to meet the needs of Connecticut as follows in this checklist.)</p>
<p><b>PO.45.5.CT.</b> Personnel at CNG dispensing stations must be trained (Conn. Agencies Regs. 29-329-4, (Amd)1-6) [Added October 1997].</p>	<p>Verify that all persons employed in the transfer of compressed natural gas (CNG) at automotive CNG dispensing stations responsible for the operation or maintenance of CNG dispensing systems including containers, are trained by the employer in the following:</p> <ul style="list-style-type: none"> <li>- the physical hazards of the CNG</li> <li>- system and equipment operation and maintenance requirements</li> <li>- emergency procedures.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PO.45.6.CT.</b> Personnel at CNG dispensing stations must be trained (Conn. Agencies Regs. 29-329-4, (Add) 4-4.2.9 [Added October 1997].</p>	<p>Verify that the training is documented and is repeated at least once every 2 yr.</p>
<p><b>PO.45.7.CT.</b> Cascade container systems at CNG dispensing stations must meet marking requirements (Conn. Agencies Regs. 29-329-4, (Add) 4-5.4 [Added October 1997].</p>	<p>Verify that outdoor compression equipment and storage containers that are part of a dispensing system are protected to minimize the possibility of physical damage and vandalism with concrete filled steel bollards, a minimum of 6 in. diameter Scheduled 80 steel.</p>
<p><b>PO.45.8.CT.</b> CNG dispensing system tests, checks, and retests must be documented (Conn. Agencies Regs. 29-329-4, (Add) 4-10.3 [Added October 1997].</p>	<p>Verify that all American Society of Mechanical Engineers (ASME) and Department of Transportation (DOT) cascade container systems at dispensing stations are marked "Compressed Natural Gas" and "Flammable Gas" in letters four in. in height with a contrasting background surrounded by a 1/2 in. rectangular border on both sides of the container.</p> <p>Verify that system testing, checks, and retests are documented in writing by the owner of a dispensing system for a minimum of 2 yr and are available for inspection.</p> <p>Verify that the documentation includes the name of the person and company performing the test, check or retest.</p>
<p><b>PO.45.9.CT.</b> A emergency manual shutdown device is required for CNG dispensing areas (Conn. Agencies Regs. 29-329-4, (Amd) 4-11.6 [Added October 1997].</p>	<p>Verify that an emergency manual shutdown device is provided at the dispensing area and also at a location remote from the dispensing area.</p> <p>Verify that the remote emergency manual shutdown device is clearly identified and easily accessible switch(es) or circuit breaker(s) and is provided at a location not less than 20 ft nor more than 100 ft from dispensing device(s), to shut off the power to all dispensing devices in the event of an emergency.</p>
<p><b>PO.45.10.CT.</b> CNG dispensing areas must have warning signs (Conn. Agencies Regs. 29-329-4, (Amd) 4-14.9 [Added</p>	<p>Verify that warning signs with the words NO SMOKING, NO OPEN FLAMES PERMITTED AND FLAMMABLE GAS in English at least 1 in. in height with a contrasting background are posted at all compressor areas.</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p>October 1997].</p> <p><b>PO.45.11.CT.</b> CNG dispensing areas must have warning signs (Conn. Agencies Regs. 29-329-4, (Add) 4-18.4 [Added October 1997].</p> <p><b>PO.45.12.CT.</b> When CNG dispensing areas are located with other motor fuels, specific requirements must be met (Conn. Agencies Regs. 29-329-4, (Add) 4-18.5 [Added October 1997].</p> <p><b>PO.45.13.CT.</b> CNG dispensing areas must be protected from vehicle impact (Conn. Agencies Regs. 29-329-4, (Add) 4-18.6 [Added October 1997].</p>	<p>(NOTE: The definition of fleet vehicle or public service station shall include the piping, tubing, fittings, gas compression equipment, storage containers and dispensing devices used to dispense CNG into a fuel container to power a motor vehicle.)</p> <p>(NOTE: Fleet vehicle automotive service stations do not require an attendant on duty during dispensing of compressed natural gas (CNG) into the fuel tanks of motor vehicles. If an attendant is on duty, the attendant is responsible for the proper observation, supervision and control of the dispensing of compressed natural gas into the fuel tanks of motor vehicles.)</p> <p>Verify that, when an attendant is not on duty, the owner of the fleet vehicle service station trains his employees and other persons dispensing motor fuel into their vehicles.</p> <p>Verify that the fleet vehicle service station dispensing area is suitably illuminated by a reliable light source when in use.</p> <p>Verify that, when CNG dispensing locations, fleet vehicle, and public, are located on the same property where other pressurized gases and flammable and combustible liquid motor fuels are dispensed into motor vehicles the following requirements are met:</p> <ul style="list-style-type: none"> <li>- the different motor fuel dispensers are located on a separate island, and there is a minimum of 20-ft separations between the CNG dispenser(s) and the other different fuel dispensers</li> <li>- all dispensers are marked in accordance with the provisions of Section 4-18.8.</li> </ul> <p>Verify that, when dispensing devices are remote from and not a part of a storage container or compression equipment unit, they are installed in accordance with any dispenser vehicle collision requirements of the manufacturer and with the following:</p> <ul style="list-style-type: none"> <li>- mounted on and bolted to a concrete island, a minimum of 8 in. adjacent to ground level</li> <li>- protected with concrete filled steel bollards, a minimum of 6 in. diameter scheduled 80 steel</li> <li>- located to protect the dispenser from damage by vehicle impact.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<p><b>PO.45.14.CT.</b> CNG dispensing areas must have warning signs (Conn. Agencies Regs. 29-329-4, (Add) 4-18.7 [Added October 1997].</p> <p><b>PO.45.15.CT.</b> CNG dispensing areas must meet specific marking requirements when other fuels are dispensed (Conn. Agencies Regs. 29-329-4, (Add) 4-18.8 [Added October 1997].</p>	<p>Verify that dispensing devices, attached to or a part of storage container or compression equipment units, are protected by one of the following:</p> <ul style="list-style-type: none"> <li>- vehicle collision installation requirements of the manufacturer</li> <li>- with concrete filled steel bollards, a minimum of 6 in. diameter scheduled 80 steel, located to protect the dispenser from damage by vehicle impact.</li> </ul> <p>Verify that warning signs with the words STOP MOTOR, NO SMOKING, NO OPEN FLAMES PERMITTED AND FLAMMABLE GAS in English at least 1 in. in height with a contrasting background are posted at all dispensing locations.</p> <p>Verify that warning signs are visible and legible from the point of transfer into the motor vehicle.</p> <p>(NOTE: Warning signs identifying the type of motor fuel must be posted at all dispensing devices where both gaseous and liquid motor fuels are dispensed into the fuel tanks of motor vehicles. Liquid motor fuels include gasoline, diesel fuel and kerosene. Gaseous motor fuels include compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG).)</p> <p>Verify that each warning sign is at least 3 ft above adjacent ground level and identifies the fuel in English in letters at least 3 1/2 in. in height with a contrasting margin.</p> <p>Verify that the name of the fuel is not abbreviated and the contrasting margin is at least 2 in. from the letters.</p> <p>Verify that the warning signs are marked as follows:</p> <ul style="list-style-type: none"> <li>- LIQUEFIED PETROLEUM GAS or PROPANE, is centered in black letters with a yellow background</li> <li>- COMPRESSED NATURAL GAS, appears in black letters with a yellow background.</li> <li>- LIQUEFIED NATURAL GAS, appears in black letters with a yellow background.</li> <li>- the common name of a flammable liquid, such as GASOLINE, appears in white letters with a red background.</li> <li>- common name of a combustible liquid, such as DIESEL FUEL or KEROSENE, appears in white letters with a green background.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p><b>PO.80.</b> <b>USED OIL BURNERS</b></p> <p><b>PO.80.1.CT.</b> The burning of used oil in residential boilers is prohibited (Conn. Agencies Regs.. 22a-449(c)-106(b)(1)).</p>	<p>Verify that used oil is not sold or offered for sale for burning in residential boilers.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> October 1997
<p><b>PO.85.</b> <b>USED OIL MARKETING</b></p> <p><b>PO.85.1.CT.</b> Waste oil marketers must have a waste analysis plan (Conn. Agencies Regs.. 22a-449(c)-106(b)(2)).</p>	<p>Verify that waste oil marketers have a written waste analysis plan, as specified in 40 Code of Federal Regulations (CFR) 265.13, for each facility.</p>

## SECTION 9

### SOLID WASTE MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for Solid Waste Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

NOTE: The citations in this revised protocol have been changed from RCSA to Conn. Agencies Regs.

#### Definitions

- *Air Pollution Residue* - unburned particles and air pollution control reactants that become entrained in the stack gases of an incinerator and are removed and collected by air pollution control equipment (Conn. Agencies Regs. 22a-209-15(a)).
- *All Weather Access* - affected roads or land surface can support operation of vehicles for the transportation of solid waste and vehicles for the maintenance of solid waste facilities under all normal climatic conditions, provided that snow is removed and flooding is precluded (Conn. Agencies Regs. 22a-209-1)).
- *Alter* -
  1. when referring to a solid waste facility which has no permit, means to change the existing configuration or method of operation of the facility in any manner, including but not limited to adding to the volume of solid waste deposited at the facility
  2. when referring to a solid waste facility which holds a permit, means to change the approved configuration or methods of operation of the facility in any manner, including but not limited to adding to the approved volume of solid waste deposited at the facility (Conn. Agencies Regs. 22a-209-1)).
- *Biological* - a preparation made from a living organism or its products, including vaccines and cultures, intended for use in diagnosing, immunizing, or treating humans or animals or in research (Conn. Agencies Regs. 22a-209-15(a)).
- *Biomedical Waste* - untreated solid waste, any disposable container and any reusable container which has not been decontaminated, generated during administration of medical care or the performance of medical research involving humans or animals, including infectious waste, pathological waste, and chemotherapy waste, but excluding any solid waste that is a hazardous waste pursuant to Conn. Agencies Regs. 22a-115 or a radioactive material regulated pursuant to Conn. Agencies Regs. 22a-148, untreated solid waste generated during the administration of medical care in a single or multiple family residence by a resident thereof, discarded materials used for personal hygiene, i.e., diapers, facial tissue, and sanitary napkins, unless such materials are isolation waste, syringes, hypodermic needles and other medical equipment used by farmers, provided that such equipment is not excluded when used by a veterinarian or at the direction of a veterinarian, and samples of biomedical waste collected and transported by Department personnel for enforcement purposes.

(NOTE: Multiple family residence does not include any facility specified in the definition of biomedical waste generator as set forth in this section.)

- *Biomedical Waste Generator (or Generator)* - any person who owns or operates a facility that produces biomedical waste in any quantity, including, but not limited to, the following: general hospital, skilled nursing facilities or convalescent hospitals, intermediate care facilities, in-patient care facilities for developmentally disabled, chronic dialysis clinics, free clinics, health maintenance organizations, surgical clinics, acute

- psychiatric hospitals, laboratories, medical buildings, physicians offices, veterinarians, dental offices, and funeral homes (Conn. Agencies Regs. 22a-209-15(a)).
- *Biomedical Waste Incinerator Residue* - bottom ash, air pollution control residue, and other residuals of the combustion process of an incinerator utilized for the combustion of biomedical waste (Conn. Agencies Regs. 22a-209-15(a)).
- *Biomedical Waste Treatment Facility* - a solid waste facility capable of storing, treating, or disposing of any amount of biomedical waste, excluding any facility where the only biomedical waste stored, treated, or disposed of is biomedical waste generated at the site where the facility is located (Conn. Agencies Regs. 22a-209-15(a)).
- *Biomedical Waste Transporter (or Transporter)* - a person engaged in the transportation of biomedical waste by air, rail, highway, or water (Conn. Agencies Regs. 22a-209-15(a)).
- *Bird Hazard* - an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants (Conn. Agencies Regs. 22a-209-1).
- *Blood Product* - any substance derived from human blood, including but not limited to plasma, platelets, red or white blood cells, and interferon (Conn. Agencies Regs. 22a-209-15(a)).
- *Bulky Waste* - landclearing debris and waste resulting directly from demolition activities other than clean fill (Conn. Agencies Regs. 22a-209-1).
- *Cell Construction Method* - the spreading, compacting, and daily covering of solid wastes through use of the area, ramp, or trench methods of landfilling (Conn. Agencies Regs. 22a-209-1).
- *Certified Operator* - the solid waste facility operator or an employee of the such operator who is present onsite and oversees or carries out the daily operation of the facility, and whose qualifications are approved in accordance with Conn. Agencies Regs. 22a-209-6 (Conn. Agencies Regs. 22a-209-1).
- *Compost Pad* - a cleared, graded surface within a leaf composting facility upon which windrows are placed for composting (Conn. Agencies Regs. 22a-208i-1).
- *Container* - any receptacle in which material is placed. Primary container means the initial container in which biomedical waste is placed. Secondary container means a container in which the primary container is placed (Conn. Agencies Regs. 22a-209-15(a)).
- *Cover Material* - soil, or other suitable material as approved by the Commissioner, which is used to cover compacted solid waste in a solid or special waste disposal area. Any soils used shall be classified as GM, silty gravels, poorly graded gravel-sand-silt mixtures; GC, clayey gravels, poorly graded gravel-sand-clay mixtures; SM, silty sands, poorly graded sand-silt mixtures; SC, clayey sands, poorly graded sand-clay mixtures; ML, inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity in accordance with the unified soil classification system (Conn. Agencies Regs. 22a-209-1).
- *Decontaminate* - to substantially reduce or eliminate, by disinfection or other means, any biological hazard that is or may be associated with biomedical waste (Conn. Agencies Regs. 22a-209-15(a)).
- *Facility Plan* - the engineering studies and proposals to build, establish, alter, operate, monitor, and close a solid waste facility, required by Conn. Agencies Regs. 22a-209-4(b)(2) (Conn. Agencies Regs. 22a-209-1).
- *Floodplain* - the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, which are inundated by the base flood (Conn. Agencies Regs. 22a-209-1).

- *Groundwater Monitoring Well* - a dug, driven, or drilled well used to determine groundwater elevation, direction of groundwater flow, or the quality of groundwater (Conn. Agencies Regs. 22a-209-1).
- *Groundwaters* - those waters of the state which naturally exist or flow below the surface of the ground (Conn. Agencies Regs. 22a-430-3).
- *Hazardous Waste* - any waste material which may pose a present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of or otherwise managed, including hazardous waste identified in accordance with Section 3001 of the *Resource Conservation and Recovery Act* (RCRA) of 1976 (42 U.S. Code (USC) 6901 et seq.) as amended (Conn. Agencies Regs. 22a-209-1).
- *Home Composting* - the accelerated aerobic biodegradation and stabilization of vegetative organic solid waste generated by a homeowner or tenant of a single or multi-family residential unit when composting occurs at such residences (Conn. Agencies Regs. 22a-208i-1).
- *Infectious Agent* - any organisms, such as a virus or bacterium, that is capable of being communicated by invasion and multiplication in body tissue and capable of causing disease or adverse health impacts in humans (Conn. Agencies Regs. 22a-209-15(a)).
- *Infectious Waste* - waste that is capable of causing an infectious disease, is one of the wastes listed below, or is waste identified as infectious by a licensed health care provider. Waste is deemed capable of causing an infectious disease if there is reason to believe that it has been contaminated by an organism that is known or suspected to be pathogenic to humans and if such organism may be present in sufficient quantities and with sufficient virulence to transmit disease. The following are listed as infectious waste (Conn. Agencies Regs. 22a-209-15(a)):
  1. any discarded culture or stock of infectious agents and associated biologicals, including human and animal cell cultures from clinical, hospital, public health, research, and industrial laboratories; any waste from the production of biologicals, any discarded etiologic agent; any discarded live or attenuated vaccine or serum; and any discarded culture dish or device used to transfer, inoculate, or mix cell cultures
  2. any body fluid, waste human blood, or waste blood product, any container of any of the foregoing, and any disposable item that is saturated or dripping with a body fluid or that was saturated or dripping with a body fluid and has since caked with dried body fluid
  3. any discarded unused sharp and any residual substance therein
  4. any unused hypodermic needle, scalpel blade, suture needle, or syringe
  5. any discarded animal carcass, animal body part or animal bedding, when the carcass, part, or bedding is known to be contaminated with or to have been exposed to an infectious agent
  6. isolation waste
  7. any material collected during or resulting from the cleanup of a spill of infectious or chemotherapy waste
  8. any waste that is neither a hazardous waste pursuant to Section 22a-115 nor a radioactive material subject to Section 22a-148 and that is mixed with infectious waste.
- *Interment* - burial in a cemetery or burial place (Conn. Agencies Regs. 22a-209-15(a)).
- *Leaf or Leaves* - the foliage of trees (Conn. Agencies Regs. 22a-208i-1).
- *Leaf Compost* - the product of leaf composting (Conn. Agencies Regs. 22a-208i-1).
- *Leaf Composting or Composting of Leaves* - the accelerated aerobic biodegradation and stabilization of leaves under controlled conditions (Conn. Agencies Regs. 22a-208i-1).
- *Leaf Composting Facility* - land, including structures and appurtenances thereon, other than home composting areas, where leaf compost takes place (Conn. Agencies Regs. 22a-208i-1).

- *Lift* - a horizontal layer of cells within a solid waste disposal area at which the cell construction method is utilized (Conn. Agencies Regs. 22a-209-1).
- *Lower Explosive Limit (LEL)* - the lowest percent by volume of gas which will propagate a flame in air at 25 °C and atmospheric pressure (Conn. Agencies Regs. 22a-209-1).
- *Maximum High Water Table* - the highest elevation reached by the upper level of the groundwater as determined by an engineering evaluation conducted in accordance with test methods approved by the Commissioner (Conn. Agencies Regs. 22a-209-1).
- *Open Dump* - a site at which solid waste is disposed of in a manner which does not comply with Subtitle D of the RCRA, (42 USC 6901 et seq.), as amended, and regulations promulgated thereunder (Conn. Agencies Regs. 22a-209-1).
- *Operator* - the person with ultimate responsibility for managing a leaf composting facility (Conn. Agencies Regs. 22a-208i-1).
- *Owner* - a person who owns a leaf composting facility (Conn. Agencies Regs. 22a-208i-1).
- *Pathological Waste* - any human tissue, organ, body part removed during surgery, autopsy, or other medical procedure. Pathological waste does not include formaldehyde or other preservative agent, or a human corpse or part thereof (Conn. Agencies Regs. 22a-209-15(a)).
- *Public Airport* - an airport open to the public without prior permission and without restrictions within the physical capacities of available facilities (Conn. Agencies Regs. 22a-209-1).
- *Resource Recovery Facility* - a volume reduction plant, as defined by Section 22a-207 of the Connecticut General Statutes (Conn. Gen. Stat.) as amended, utilizing processes aimed at reclaiming the material or energy values from solid wastes (Conn. Agencies Regs. 22a-209-1).
- *Sharps* - an item capable of causing a puncture or cut, including but not limited to a hypodermic needle, scalpel blade, and broken glassware, provided that (Conn. Agencies Regs. 22a-209-15(a)):
  1. broken glassware is not deemed a sharp unless it is known to be contaminated with an infectious agency
  2. a syringe, regardless whether a hypodermic needle is attached.
- *Sheet Leaf Composting* - the application of leaves to land for use as a soil amendment mulch (Conn. Agencies Regs. 22a-208i-1).
- *Small Quantity Generator* - a biomedical waste generator that generates less than 50 lb of biomedical waste in any calendar month or who transports, or delivers for transport, in any single shipment less than 50 lb of biomedical waste (Conn. Agencies Regs. 22a-209-15(a)).
- *Solid Waste Boundary* - the outermost perimeter of the solid or special waste (projected in the horizontal plane) as it would exist at completion of the permitted disposal activity at a solid waste or special waste disposal area (Conn. Agencies Regs. 22a-209-1).
- *Special Waste Disposal Area* - a solid waste disposal area at which special wastes are disposed of (Conn. Agencies Regs. 22a-209-1).
- *Special Wastes* - the following wastes, so long as they are not hazardous waste pursuant to CONN. GEN. STAT. 22a-115 or radioactive material subject to CONN. GEN. STAT. 22a-148 (Conn. Agencies Regs. 22a-209-1):



1. water treatment, sewage treatment, or industrial sludges, liquid, solids and contained gases; fly-ash and casting sands or slag; and contaminated dredge spoils
  2. scrap tires
  3. bulky wastes
  4. asbestos
  5. residue
  6. biomedical waste.
- *Spill* - any unplanned release, leaking, pumping, pouring, emitting, or depositing of biomedical waste or any planned release, leaking, pumping, pouring emitting, or depositing of biomedical waste in violation of the requirement of this section.
  - *Storage* - the temporary holding of biomedical waste, other than temporary holding conducted in accordance with the conditions within this section at any location before treating or disposing of it or transporting it for treatment, disposal, or further storage (Conn. Agencies Regs. 22a-209-15(a)).
  - *Stormwater* - precipitation runoff (Conn. Agencies Regs. 22a-209-1).
  - *Surface Water* - waters of the state which are not groundwaters (Conn. Agencies Regs. 22a-430-3).
  - *Transfer* - to move, or the movement of, biomedical waste from one location on the site where such waste was generated to another location on the site (Conn. Agencies Regs. 22a-209-15(a)).
  - *Transfer Station* - a volume reduction plant, as defined by CONN. GEN. STAT. 22a-207, as amended, that is a central collection point for the solid waste generated within a municipality or group of municipalities, where solid wastes received are transferred to a vehicle for removal to another solid waste facility (Conn. Agencies Regs. 22a-209-1).
  - *Transport* - to move biomedical waste by air, rail, highway, or water from the site at which the waste was generated to another location on the site (Conn. Agencies Regs. 22a-209-15(a)).
  - *Transport Vehicle* - any conveyance used for the transportation of biomedical waste. Each cargo-carrying compartment of a vehicle, such as a truck trailer or railroad freight care, is a separate vehicle (Conn. Agencies Regs. 22a-209-15(a)).
  - *Treat* - to decontaminate biomedical waste and to physically alter it is as to render it unrecognizable as biomedical waste (Conn. Agencies Regs. 22a-209-15(a)).
  - *Treatment* - the act of treating or the state of being treated (Conn. Agencies Regs. 22a-209-15(a)).
  - *Vector* - an insect or rodent or other animal (not human) which can transmit infectious diseases from one person or animal to another person or animal (Conn. Agencies Regs. 22a-209-1).
  - *Vertical Expansion* - an expansion of an existing solid waste disposal area such that future disposal of municipal solid waste will take place only where solid waste has previously been disposed of and is still present (Conn. Agencies Regs. 22a-209-1).
  - *Water Table* - that surface of a body of unconfined groundwater at which the pressure is equal to that of the atmosphere (Conn. Agencies Regs. 22a-209-1).
  - *Working Face* - that portion of a solid waste or special waste disposal area where the waste is deposited, spread, and compacted prior to the placement of cover material (Conn. Agencies Regs. 22a-209-1).
  - *Windrow* - an elongated pile of leaves formed for the purpose of composting (Conn. Agencies Regs. 22a-208i-1).



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<b>REFER TO CHECKLIST ITEMS:</b>		<b>REFER TO PAGE NUMBERS:</b>
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
State-Specific Solid Waste Requirements	SO.5.1.CT. through SO.5.3.CT.	9-7
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Biomedical Waste Treatment - Facilities	SO.120.15.CT. through SO.120.27.CT.	9-33
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Landfills		
Water Protection	SO.135.1.CT. through SO.135.8.CT.	9-39
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Waste Tire Facilities	SO.160.1.CT.	9-49
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Liner Systems for Residue Disposal	SO.175.9.CT. through SO.175.13.CT.	9-56
Closure of Solid Waste Facilities	SO.180.1.CT. through SO.180.4.CT.	9-58

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.5. STATE-SPECIFIC SOLID WASTE REQUIREMENTS</b></p> <p><b>SO.5.1.CT.</b> Installations/ CW facilities must not operate open dumps (Conn. Agencies Regs. 22a-209-2).</p> <p><b>SO.5.2.CT.</b> Installations/ CW facilities must meet per- mit requirements for solid waste facilities (Conn. Agencies Regs. 22a-209-3, 22a-209-4(a), (c), (c)(1), (e) and (j), and 22a-209-11(a) and (g)).</p> <p><b>SO.5.3.CT.</b> Solid waste facilities must meet require- ments for operator certifica- tion (Conn. Agencies Regs. 22a-209-6(a) and (c)).</p>	<p>Verify that the installation/CW facility does not have an open dump.</p> <p>Verify that solid waste disposal is done only through use of solid waste disposal areas, volume reduction plants, biomedical waste treatment facilities, and resources recovery systems established and operated in accordance with these solid waste requirements and solid waste facility permit conditions.</p> <p>Verify that the installation/CW facility building, establishing, or altering a solid waste facility obtains a permit.</p> <p>Verify that any installation/CW facility operating or causing the operation of a solid waste facility obtains a permit.</p> <p>(NOTE: All operating facilities with a valid permit to construct will be allowed to operate until the permit to operate is issued.)</p> <p>(NOTE: Areas which are solely for the disposal of clean fill are exempted from solid waste management requirements, including permit requirements.)</p> <p>Verify that all terms and conditions of the permit are met immediately.</p> <p>Verify that a complete set of as-built drawings are submitted within 90 days of completion of construction of a solid waste facility other than a solid or special waste disposal area.</p> <p>(NOTE: Variances may be sought for facility design, operating requirements, or temporary operations. Unless and until a variance is granted, the solid waste facility must comply with applicable statutes, regulations, and permit conditions.)</p> <p>Verify that a certified operator is present at the solid waste facility at all times during operating hours.</p> <p>Verify that the Department is notified of any of the following occurrences at a solid waste facility:</p> <ul style="list-style-type: none"> <li>- no certified operator</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>Special Wastes</b></p> <p><b>SO.5.4.CT.</b> Special waste disposal on installations/CW facilities must meet the same permit, operation, and management requirements as solid waste disposal or meet additional requirements (Conn. Agencies Regs. 22a-209-8(a) and (e)) [Revised October 1997].</p> <p><b>SO.5.5.CT.</b> Combined disposal of special waste and other solid wastes must meet specific requirements (Conn. Agencies Regs. 22a-209-8(c)).</p> <p><b>SO.5.6.CT.</b> Operators han-</p>	<ul style="list-style-type: none"> <li>- the facility's sole certified operator's certification lapses or is revoked</li> <li>- the certified operator leaves.</li> </ul> <p>Verify that a solid waste facility without a certified operator with valid certification applies to the Department to have an appropriate person certified.</p> <p>(NOTE: A solid waste facility may operate without a certified operator if the installation/CW facility notifies the Department of the lack of an operator with valid certification and applies to the Department to have an appropriate person certified.)</p> <p>(NOTE: See the definitions for a list of special wastes. Special waste disposal is exempted from some solid waste disposal requirements. Also, there are some additional special considerations for special waste disposal. These exemptions and additions to solid waste disposal requirements are listed in this section on special waste disposal.)</p> <p>Verify that special waste disposal meets permit, operation, and management requirements for solid waste disposal.</p> <p>(NOTE: Special waste disposal requirements do not prohibit the diversion of special wastes to composting operations or for resources recovery.)</p> <p>(NOTE: A separate permit to operate or to construct is not required if combined disposal of the waste in question with other solid wastes or special wastes is authorized and the requirements for these special wastes are adequately provided for in the facility plan.)</p> <p>Verify that any combined disposal of special wastes and other solid wastes or special wastes is approved by the Commissioner and the approval becomes part of the facility plan.</p> <p>Verify that any use of casting sands, contaminated dredge spoils or fly-ash as cover material is approved by the Commissioner.</p> <p>Verify that operators handling special waste have experience or training in the</p>

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<p>dling special waste disposal must meet specific certification requirements (Conn. Agencies Regs. 22a-209-8(d)).</p> <p><b>SO.5.7.CT.</b> Installations/CW facilities disposing of special waste must meet special handling requirements, if required by the Commissioner (Conn. Agencies Regs. 22a-209-8(f)).</p> <p><b>Special Wastes: Bulky Wastes</b></p> <p><b>SO.5.8.CT.</b> Special waste disposal areas must meet specific handling requirements for disposal of bulky wastes (Conn. Agencies Regs. 22a-209-8(h)).</p>	<p>unique characteristics and handling requirements of the special waste that met certification requirements.</p> <p>Verify that, if the Commissioner/permit requires it, the following handling requirements are met for special wastes:</p> <ul style="list-style-type: none"> <li>- the installation/CW facility submits a report for each specific waste on the physical, chemical, and leachate analyses of a representative number of samples of the waste materials, such analyses being conducted by methods approved or prescribed by the Commissioner</li> <li>- pretreatment or dewatering of sludges or other waste materials with high moisture contents</li> <li>- erosion and siltation measures for the disposal of easily eroded materials</li> <li>- dust control measures, including prompt application of cover material, use of water or calcium chloride, all-weather road surfaces, washing of vehicles and use of dust-filtering masks for the disposal of easily airborne waste materials</li> <li>- odor control, including limited working areas and prompt cover and use of masking agents with specific written approval of the Commissioner</li> <li>- equipment maintenance procedures, including frequent inspection and prompt replacement of air filters and other repairs that are needed when handling fine or abrasive waste materials.</li> </ul> <p>(NOTE: Solid waste disposal requirements for daily cover and groundwater separation distances for disposal of special wastes may be reduced by the Commissioner.)</p> <p>Verify that disposal at bulky waste disposal areas is limited to landclearing debris and wastes resulting from demolition activities.</p> <p>(NOTE: Bulky waste disposal areas operated under permits issued before 21 February 1985, may be exempted from the disposal requirements by the Commissioner.)</p> <p>(NOTE: Requirements for daily cover may be reduced, and groundwater separation distance may be reduced, upon approval of the Commissioner.)</p>

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**Special Wastes: Asbestos  
Wastes**

**SO.5.9.CT.** Special waste disposal areas must meet specific handling requirements for asbestos waste (Conn. Agencies Regs. 22a-209-8(i)).

Verify that any asbestos disposal is authorized by the Commissioner.

Verify that a copy of the authorization is given to the following people before asbestos disposal occurs:

- disposal area operator
- asbestos waste generator
- authorized waste hauler.

Verify that the disposal area operator makes sure the following requirements are met before asbestos waste is accepted:

- asbestos is packaged in impermeable dust-tight containers such as heavy-duty 6 mL plastic bags or sealed fiber pack drums
- all containers are labeled in large, readable letters that say: **CONTAINS ASBESTOS - AVOID OPENING OR BREAKING CONTAINER - BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH**
- the asbestos is transported separately from other waste materials.

Verify that asbestos is deposited at the base of the disposal area's working face without breaking or opening of containers.

Verify that asbestos containers are covered with 9 in. of cover material.

(NOTE: The Commissioner may approve a dry nonasbestos waste material as an alternate cover material for asbestos containers.)

**Special Wastes: Lead Acid  
Batteries**

**SO.5.10.CT.** Installations/CW facilities that generate, transport, store, or collect spent lead-acid batteries must meet specific requirements (Conn. Agencies Regs. 22a-449(c)-106(c)).

Verify that spent lead-acid batteries are not opened, handled, or stored in a manner which may rupture the battery case, cause it to leak, or produce short circuits.

Verify that spent batteries are not stored near incompatible materials unless they are protected from the other materials by one of the following:

- dike
- berm

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- other device.

Verify that spent batteries are stored on an impervious surface and inspected weekly for leaks and deterioration.

Verify that no facility accumulates greater than 20,000 kg of spent batteries at any one time unless they have submitted to the Commissioner a completed spent battery accumulation registration.

Verify that the registration is submitted no later than 30 days prior to accumulating greater than 20,000 kg of spent batteries.

(NOTE: Installations/CW facilities that generate, transport, store, or collect spent lead-acid batteries other than for recycling are subject to the requirements in the Hazardous Waste Management section.)



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.15. TRANSFER FACILITIES</b></p> <p><b>SO.15.1.CT.</b> Solid waste transfer stations must meet permit requirements (Conn. Agencies Regs. 22a-209-9 (a) and (b)) [Revised October 1997].</p> <p><b>SO.15.2.CT.</b> Solid waste transfer stations must meet access requirements (Conn. Agencies Regs. 22a-209-9 (c)).</p> <p><b>SO.15.3.CT.</b> Solid waste transfer stations must meet enclosure requirements (Conn. Agencies Regs. 22a-209-9(d)).</p> <p><b>SO.15.4.CT.</b> Solid waste transfer stations must meet screening requirements (Conn. Agencies Regs. 22a-209-9(e)).</p>	<p>Verify that a solid waste transfer station has a permit and complies with all permit conditions.</p> <p>(NOTE: An application for a transfer station permit to construct must include a copy of any haul-away contract made by a city, town, borough or regional authority for collection, transportation, processing, storage and disposal outside its boundaries of solid wastes generated within its boundaries.).</p> <p>Verify that a sign is posted at the facility entrance which states the following:</p> <ul style="list-style-type: none"> <li>- permittee's name</li> <li>- hours of operation</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that access to the facility is controlled through use of appropriate fences, gates, and signs to prevent unauthorized use.</p> <p>Verify that any buildings are roofed and enclosed on all sides, or otherwise enclosed to control dust and litter.</p> <p>Verify that screening from view is provided for a transfer station located within 500 ft of a residence.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<b>SO.15.5.CT.</b> Solid waste transfer stations must meet the requirement for a certified operator (Conn. Agencies Regs. 22a-209-9(f)).	Verify that a certified operator is present at all times during working hours.
<b>SO.15.6.CT.</b> Solid waste transfer stations must meet storage requirements (Conn. Agencies Regs. 22a-209-9(g)).	<p>Verify that no solid waste is stored within the property boundary for more than 48 h.</p> <p>(NOTE: Solid waste storage at transfer stations may exceed 48 h if a legal holiday weekend is involved, or the Commissioner approves lengthier storage times.)</p> <p>Verify that a minimum storage capacity of 24 h is provided for solid wastes in transfer stations with a design capacity exceeding 100 tons of solid wastes per 8 h day.</p>
<b>SO.15.7.CT.</b> Solid waste transfer stations must allow only solid waste unloading within the enclosed structure and approved designated areas (Conn. Agencies Regs. 22a-209-9(h)).	<p>Verify that unloading of solid waste takes place only in the enclosed structure and/or a designated area which has been approved by the Commissioner.</p> <p>Verify that scavenging does not occur in the unloading area.</p>
<b>SO.15.8.CT.</b> Solid waste transfer stations must control litter (Conn. Agencies Regs. 22a-209-9(i)).	<p>Verify that solid waste is confined to the unloading, loading, and handling area.</p> <p>Verify that transfer stations and adjacent areas are kept clean and reasonably free of litter.</p>
<b>SO.15.9.CT.</b> Solid waste transfer stations must meet requirements for hazardous and special wastes (Conn. Agencies Regs. 22a-209-9(j)).	<p>Verify that hazardous and special wastes are excluded from solid waste transfer stations.</p> <p>(NOTE: The Commissioner may allow special handling for hazardous and special wastes at solid waste transfer stations.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<b>SO.15.10.CT.</b> Solid waste transfer stations must meet air quality requirements (Conn. Agencies Regs. 22a-209-9(k)).	<p>Verify that dust and odors from solid waste unloading and transfer station operations are controlled at all times to assure compliance with the applicable regulations of the Department for the Abatement of Air Pollution.</p> <p>Verify that any open burning of solid waste is conducted in compliance with Department for the Abatement of Air Pollution regulations.</p>
<b>SO.15.11.CT.</b> Solid waste transfer stations must meet fire control requirements (Conn. Agencies Regs. 22a-209-9(l)).	<p>Verify that the following are not accepted at the solid waste transfer station:</p> <ul style="list-style-type: none"> <li>- burning solid waste</li> <li>- solid waste at a temperature likely to cause fire</li> <li>- solid waste of a highly flammable or explosive nature.</li> </ul> <p>Verify that adequate equipment is provided for fire control.</p> <p>Verify that arrangements are made with the local fire protection agency to acquire services immediately when needed.</p> <p>Verify that the Department's Solid Waste Management Unit is immediately notified when a fire occurs.</p>
<b>SO.15.12.CT.</b> Solid waste transfer stations must meet vector control requirements (Conn. Agencies Regs. 22a-209-9(m)).	<p>Verify that conditions are unfavorable for the harboring, feeding, and breeding of vectors control and exterminate vectors.</p>
<b>SO.15.13.CT.</b> Solid waste transfer stations must do routine operational maintenance (Conn. Agencies Regs. 22a-209-9(n)).	<p>Verify that provision is made for routine operational maintenance of the transfer station and appurtenances.</p>
<b>SO.15.14.CT.</b> Solid waste transfer stations must meet shutdown requirements (Conn. Agencies Regs. 22a-209-9(o)).	<p>Verify that a Commissioner-approved alternative method for waste disposal is available if the transfer station is somehow rendered inoperable.</p> <p>Verify that the Department is notified within 24 h when a shutdown occurs.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.15.15.CT.</b> Solid waste transfer stations must meet recordkeeping requirements (Conn. Agencies Regs. 22a-209-9(p)).</p>	<p>Verify that daily records are kept in a manner acceptable to the Commissioner.</p> <p>Verify that records include each of the following:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each community using the transfer station</li> <li>- total weights from other sources</li> <li>- specific sites where waste was delivered for disposal</li> <li>- tonnage of material removed for resources recovery and the markets used.</li> </ul> <p>Verify that records are available for inspection by Department employees.</p> <p>Verify that monthly summaries of these records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p>
<p><b>SO.15.16.CT.</b> Temporary solid waste transfer stations must meet requirements (Conn. Agencies Regs. 22a-209-9(q)).</p>	<p>Verify that a solid waste transfer station operating for less than 2 yr has a variance.</p> <p>(NOTE: The Commissioner will prescribe guidelines for the design and operation of solid waste transfer stations that will operate for less than 2 yr.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.25. RECYCLING</b></p> <p><b>SO.25.1.CT.</b> Installations/ CW facilities within certain municipalities must meet recycling requirements (Conn. Agencies Regs. 22a- 241b-2).</p>	<p>Verify that the following items are recycled within each municipality within 3 mo of availability of service by a regional or local processing system:</p> <ul style="list-style-type: none"> <li>- cardboard</li> <li>- glass food containers</li> <li>- leaves</li> <li>- metal food containers</li> <li>- newspaper</li> <li>- office paper</li> <li>- scrap metal</li> <li>- storage batteries</li> <li>- waste oil.</li> </ul> <p>(NOTE: The Commissioner may determine that one or more of the above- mentioned items should be landfilled or incinerated during a certain time period. An aggrieved party or parties can request a hearing on any such proposal by the Commissioner, and the Commissioner's final decision can be appealed.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.95. RESOURCE RECOVERY FACILITIES</b></p> <p><b>SO.95.1.CT.</b> Resources recovery facilities and other volume reduction plants must meet permit requirements (Conn. Agencies Regs. 22a-209-10(1) and (2)) [Citation revised October 1997].</p> <p><b>SO.95.2.CT.</b> Resources recovery facilities and other volume reduction plants must meet access requirements (Conn. Agencies Regs. 22a-209-10(3)) [Citation revised October 1997].</p> <p><b>SO.95.3.CT.</b> Resources recovery facilities and other volume reduction plants must meet storage requirements (Conn. Agencies Regs. 22a-209-10(4)) [Citation revised October 1997].</p> <p><b>SO.95.4.CT.</b> Resources recovery facilities and other volume reduction plants must meet requirements for working areas (Conn. Agencies Regs. 22a-209-10(5)) [Citation revised</p>	<p>Verify that any resources recovery facility or volume reduction plant has a permit and operates within its conditions.</p> <p>Verify that a sign is posted at the facility entrance stating the following:</p> <ul style="list-style-type: none"> <li>- permittee's name</li> <li>- hours of operation</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that access to the facility is controlled through use of appropriate fences, gates, and signs to prevent unauthorized use.</p> <p>Verify that no solid waste is stored within the property boundary for more than 48 h.</p> <p>(NOTE: Solid waste storage may exceed 48 h if a legal holiday weekend is involved or if the Commissioner approves lengthier storage times.)</p> <p>Verify that unloading of solid waste takes place only within an enclosed structure and/or only in designated areas approved in writing by the Commissioner.</p> <p>Verify that scavenging does not occur in the unloading area.</p>

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<p>October 1997].</p> <p><b>SO.95.5.CT.</b> Resources recovery facilities and other volume reduction plants must control litter (Conn. Agencies Regs. 22a-209-10(6)) [Citation revised October 1997].</p> <p><b>SO.95.6.CT.</b> Resources recovery facilities and other volume reduction plants must meet the requirement for certified operators (Conn. Agencies Regs. 22a-209-10(7)) [Citation revised October 1997].</p> <p><b>SO.95.7.CT.</b> Resources recovery facilities and other volume reduction plants must exclude specific wastes from their operations (Conn. Agencies Regs. 22a-209-10(8)) [Citation revised October 1997].</p> <p><b>SO.95.8.CT.</b> Resources recovery facilities and other volume reduction plants and biomedical waste treatment facilities must meet air quality requirements (Conn. Agencies Regs. 22a-209-10(9)) [Citation revised October 1997].</p>	<p>Verify that solid waste is confined to the unloading, loading, and handling area.</p> <p>Verify that the facility and adjacent areas are kept clean and reasonably free of litter.</p> <p>Verify that a certified operator is present at all times during working hours.</p> <p>Verify that hazardous and special wastes are excluded from facilities or plants.</p> <p>(NOTE: The Commissioner may allow special handling for hazardous and special wastes at facilities or plants.)</p> <p>Verify that air emissions, dust, and odors resulting from the unloading of solid waste and the operation of the facility or plant are controlled at all times to assure compliance with applicable Department for the Abatement of Air Pollution regulations.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.95.9.CT.</b> Resources recovery facilities and other volume reduction plants must meet fire control requirements (Conn. Agencies Regs. 22a-209-10(10)) [Citation revised October 1997].</p>	<p>Verify that fire control equipment is provided.</p> <p>Verify that arrangements are made with the local fire protection agency to get services immediately when needed.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when a fire occurs.</p>
<p><b>SO.95.10.CT.</b> Resources recovery facilities and other volume reduction plants must meet explosion requirements (Conn. Agencies Regs. 22a-209-10(11)) [Citation revised October 1997].</p>	<p>Verify that the facility or plant provides for explosion protection.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when an explosion occurs.</p>
<p><b>SO.95.11.CT.</b> Resources recovery facilities and other volume reduction plants must meet shutdown requirements (Conn. Agencies Regs. 22a-209-10(12)) [Citation revised October 1997].</p>	<p>Verify that a Commissioner-approved alternative method for the processing or transferring and disposal of solid waste is available if the facility or plant is somehow rendered inoperable.</p> <p>Verify that the Department is notified within 24 h when a shutdown occurs</p>
<p><b>SO.95.12.CT.</b> Resources recovery facilities and other volume reduction plants must meet recordkeeping requirements (Conn. Agencies Regs. 22a-209-10(13)) [Citation revised October 1997].</p>	<p>Verify that daily records are kept in a manner acceptable to the Commissioner.</p> <p>Verify that records include each of the following:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each municipality</li> <li>- total weights from other sources</li> <li>- tonnage processed</li> <li>- tonnage of residue delivered for disposal and specific sites used</li> <li>- materials removed for resources recovery and markets used.</li> </ul> <p>Verify that monthly summaries of these records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p>



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<p><b>SO.95.13.CT.</b> Resources recovery facilities and other volume reduction plants must meet requirements for temporary facilities (Conn. Agencies Regs. 22a-209-10(14)) [Citation revised October 1997].</p>	<p>Verify that a facility or plant which will operate for less than 2 yr has a variance.  (NOTE: The Commissioner will prescribe guidelines for the design and operation of facilities or plants that will operate for less than 2 yr.)</p>

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<p><b>MEDICAL WASTE</b></p> <p><b>SO.105. Generators</b></p> <p><b>SO.105.1.CT.</b> Installations/ CW facilities that generate biomedical waste must meet certain requirements (Conn. Agencies Regs. 22a-209-15(b)(1) through (2)(D)).</p> <p><b>SO.105.2.CT.</b> Installations/ CW facilities that transfer biomedical waste must meet specific requirements (Conn. Agencies Regs. 22a-209-15(d)).</p>	<p>Verify that the generator identifies the solid waste generated which is biomedical waste.</p> <p>Verify that the generator segregates biomedical waste from other solid waste prior to placing biomedical waste in primary containers according to the following categories:</p> <ul style="list-style-type: none"> <li>- sharps and any residual substances therein</li> <li>- body fluids in a quantity greater than 20 cm<sup>3</sup></li> <li>- other biomedical waste.</li> </ul> <p>Verify that the generator prepares a written biomedical waste management plan, for each biomedical waste generating facility, that contains policies and procedures for segregating biomedical waste and for assuring the following requirements are met:</p> <ul style="list-style-type: none"> <li>- biomedical waste mixed with hazardous waste is managed as hazardous waste</li> <li>- biomedical waste mixed with radioactive material subject to Section 22a-148 of the General Statutes is managed as radioactive material</li> <li>- any solid waste that is neither hazardous nor radioactive material and is mixed with biomedical waste is managed as biomedical waste</li> <li>- any category of biomedical waste mixed with, or placed in, a primary container with any other such category of biomedical waste.</li> </ul> <p>Verify that handling of biomedical waste during transfer does not impair the integrity of its packaging.</p> <p>Verify that trash chutes are not used to transfer biomedical waste.</p> <p>Verify that biomedical waste is not compacted or subjected to violent mechanical stress during transfer.</p>

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<p><b>MEDICAL WASTE</b></p> <p><b>SO.110.</b></p> <p><b>Containers/Labeling/ Storage Areas</b></p> <p><b>SO.110.1.CT.</b> Installations/ CW facilities storing bio- medical waste must meet requirements (Conn. Agencies Regs. 22a-209- 15(c)).</p>	<p>Verify that biomedical waste storage meets the following requirements:</p> <ul style="list-style-type: none"> <li>- biomedical waste is not mixed with other materials</li> <li>- outdoor storage areas, such as dumpsters or sheds, are locked</li> <li>- a sign displaying the universal biohazard symbol is posted wherever biomedical waste is stored</li> <li>- biomedical waste is not compacted or subjected to violent mechanical stress.</li> </ul> <p>Verify that biomedical waste is stored in areas that are accessible only to those persons authorized by the generator, transporter, or solid waste facility operator, as applicable, to handle biomedical waste.</p> <p>Verify that biomedical waste is stored so the integrity of its packaging is maintained and the waste is protected from water, precipitation, and wind.</p> <p>Verify that all biomedical waste storage areas are constructed of finished materials that are impermeable and are capable of being easily maintained in a sanitary condition.</p> <p>Verify that biomedical waste is stored only in a nonputrescent state.</p> <p>(NOTE: To maintain a nonputrescent state, biomedical waste may be refrigerated during storage.)</p> <p>Verify that stored biomedical waste is protected from animals and does not provide a breeding place or food source for insects or rodents.</p>

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<b>MEDICAL WASTE</b>  <b>SO.115.</b> <b>Transportation</b>  <b>SO.115.1.CT.</b> Biomedical waste transporters must have permits (Conn. Agencies Regs. 22a-209-15(b)(9) and (g)(1)).  <b>SO.115.2.CT.</b> A biomedical waste transporter must include his permit number on each tracking form (Conn. Agencies Regs. 22a-209-15(g)(8)).  <b>SO.115.3.CT.</b> Biomedical waste transporters must transport only biomedical waste that has met packaging requirements (Conn. Agencies Regs. 22a-209-15(e) and (b)(4)).	<p>Verify that no person transports or accepts for transport biomedical waste unless the person has a permit issued by the Commissioner.</p> <p>Verify that no person hires or uses a transporter for biomedical waste transportation unless the transporter has a permit.</p> <p>Verify that biomedical waste transporters include their permit numbers on each tracking form.</p> <p>Verify that the generator has met the packaging requirements by placing biomedical waste in containers that are:</p> <ul style="list-style-type: none"> <li>- rigid</li> <li>- leak-resistant</li> <li>- impervious to moisture</li> <li>- sufficiently strong to prevent tearing or bursting under normal conditions of use and handling</li> <li>- sealed to prevent leakage.</li> </ul> <p>Verify that sharps and any residual substances in them are in puncture-resistant containers that meet the packaging requirements.</p> <p>Verify that the generator's handling of an oversized biomedical waste item too large for standard-sized containers meets the following conditions:</p> <ul style="list-style-type: none"> <li>- handled in a manner minimizing contact with transport workers and the public</li> <li>- has a water-resistant tag identifying in indelible writing the generator's name, address, and phone number enclosed with or affixed to the item</li> <li>- the generator has indicated any special handling instructions for the item on the tracking form.</li> </ul>

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<p><b>SO.115.4.CT.</b> Biomedical waste transporters must transport only biomedical waste that meets labeling requirements (Conn. Agencies Regs. 22a-209-15(e)(1) and (b)(7)).</p> <p><b>SO.115.5.CT.</b> Biomedical waste transporters must transport only biomedical waste that has met marking requirements (Conn. Agencies Regs. 22a-209-15(e)(1) and (b)(8)).</p> <p><b>SO.115.6.CT.</b> Biomedical waste transporters must transport only biomedical waste that is accompanied by</p>	<p>Verify that the generator has not taken a biomedical waste container and reused it for biomedical waste or for any other purpose.</p> <p>(NOTE: A container can be reused if the surfaces of the container were protected from contamination through use of a liner, bag, or other device that was removed with the waste or the container has been thoroughly washed to remove any visible indication and then disinfected in the same manner that is required of contaminated vehicle surfaces.)</p> <p>Verify that the generator has affixed to, or imprinted on the outside of, each container a water-resistant label displaying in indelible writing the universal biohazard symbol or the words, MEDICAL WASTE or INFECTIOUS WASTE.</p> <p>(NOTE: A label is not required for a container of biomedical waste that has been decontaminated but not treated, but such a container must meet marking requirements.)</p> <p>Verify that the generator affixes a water-resistant identification tag to the outside of both primary and secondary containers that meets all the following requirements:</p> <ul style="list-style-type: none"> <li>- 3 in. by 5 in.</li> <li>- indicates in indelible writing the generator's name and address</li> <li>- tag on secondary container indicates in indelible writing the name, address, location, and permit number of the first transporter and the date the waste was accepted from the generator.</li> </ul> <p>Verify that when biomedical waste is transported by more than one transporter, each transporter other than the one who originally accepted the waste affixes a water resistant tag on the outside of the secondary container that meets all the following requirements:</p> <ul style="list-style-type: none"> <li>- 3 in. by 5 in.</li> <li>- affixed so that previously affixed identification cards are not hidden</li> <li>- the additional tag indicates in indelible writing the name, address, location, and permit number of the transporter affixing the tag and the date that the transporter accepted the waste.</li> </ul> <p>Verify that any biomedical waste accepted for transport is accompanied by a tracking form.</p> <p>Verify that the tracking form accurately reflects the number of containers and the</p>

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a tracking form (Conn. Agencies Regs. 22a-209-15(e)(2) and (h)(7)) [Revised October 1997].	<p>weight in pounds of all untreated and decontaminated biomedical waste accepted.</p> <p>Verify that the following are on every copy of the tracking form:</p> <ul style="list-style-type: none"> <li>- the transporter's handwritten signature</li> <li>- the date the waste was accepted from the generator or prior transporter.</li> </ul> <p>Verify that the following parties have a copy of the tracking form:</p> <ul style="list-style-type: none"> <li>- the first transporter of the waste leaves a copy of the signed and dated tracking form with the generator</li> <li>- subsequent transporters of the waste leave a copy of the signed and dated tracking form with the prior transporter</li> <li>- the final transporter retains a copy.</li> </ul>
<b>SO.115.7.CT.</b> Vehicles used by biomedical waste transporters must meet requirements (Conn. Agencies Regs. 22a-209-15(e)(3)).	<p>Verify that biomedical waste is not subjected to compaction or violent mechanical stress during loading and unloading.</p> <p>Verify that each cargo compartment is constructed of impermeable materials and kept free of visible contamination.</p> <p>Verify that no cargo compartment is used to transport any food or drink intended for human or animal consumption.</p> <p>Verify that each cargo compartment is locked when left unattended.</p>
<b>SO.115.8.CT.</b> Biomedical waste must only be transported in a nonputrescent state (Conn. Agencies Regs. 22a-209-15(e)(4)).	<p>Verify that biomedical waste is only transported in a nonputrescent state.</p> <p>(NOTE: To maintain a nonputrescent state, biomedical waste may be refrigerated during transport.)</p>
<b>SO.115.9.CT.</b> Cargo compartments holding biomedical waste must meet labeling requirements (Conn. Agencies Regs. 22a-209-15(e)(5)).	<p>Verify that the following are displayed on the two sides and back of each cargo compartment of a biomedical waste transporter:</p> <ul style="list-style-type: none"> <li>- transporter name and permit number</li> <li>- the words <b>MEDICAL WASTE</b> in letters at least 3 in. high and in a color contrasting with the color of the compartment.</li> </ul>
<b>SO.115.10.CT.</b> Biomedical	Verify that vehicle surfaces that have had contact with biomedical waste spills or

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<p>waste spills must be decontaminated (Conn. Agencies Regs. 22a-209-15(e)(6)).</p>	<p>leaks are decontaminated by cleaning with an industrial-strength detergent and one of the following procedures:</p> <ul style="list-style-type: none"> <li>- exposure to water of at least 180 °F for at least 30 s</li> <li>- exposure to a chemical sanitizer through 3 min of rinsing with or immersion in hypochlorite with 500 ppm available chlorine, phenolic solution with 500 ppm active agent, iodoform solution with 100 ppm available iodine, or quaternary ammonium solution with 400 ppm active agent.</li> </ul>
<p><b>SO.115.11.CT.</b> Personnel loading or unloading bio-medical waste onto or off a vehicle must wear personal protective equipment (Conn. Agencies Regs. 22a-209-15(e)(7)).</p>	<p>Verify that any personnel unloading or loading biomedical waste on or off a vehicle are wearing the personal protective equipment required by law.</p>
<p><b>SO.115.12.CT.</b> Vehicles carrying biomedical waste must carry a spill cleanup kit (Conn. Agencies Regs. 22a-209-15(e)(8)).</p>	<p>Verify that each vehicle carrying biomedical waste has a spill cleanup kit.</p> <p>Verify that the kit contains enough absorbent material to absorb at least 10 gal of liquid.</p> <p>Verify that the kit has 1 gal of hospital-grade disinfectant in a sprayer capable of dispersing its charge both in a mist and in a stream at a distance of 10 ft.</p> <p>Verify that the kit has 50 red plastic bags, seals, and labels, with the bags meeting specifications for the packaging of biomedical waste for transport and of a size large enough to enclose any standard-sized biomedical waste container.</p> <p>Verify that the kit includes clean, impermeable overalls, gloves, boots, caps, and surgical masks for use by at least two persons that meet all the following conditions:</p> <ul style="list-style-type: none"> <li>- boots and caps are fitted to the persons intended to wear them</li> <li>- boots and caps are made of Tyvek™ or material that provides equivalent protection</li> <li>- top boot coverings are at least 75 mL thick</li> <li>- boot soles are at least 0.75 in. thick</li> <li>- boot heels are at least 1.25 in. thick</li> <li>- gloves are 25 mL thick and of heavy neoprene or material that provides equivalent protection .</li> </ul>

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**SO.115.13.CT.** The response to a biomedical waste spill must meet specific requirements (Conn. Agencies Regs. 22a-209-15(e)(9)).

Verify that the kit includes duct tape for sealing clothing at the wrists and ankles.
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Verify that the kit contains all the following:

- a fire extinguisher
- boundary marking tape
- a high-intensity flashlight
- an American National Red Cross standard 24-unit first aid kit or its equivalent.

Verify that personnel responding to a biomedical waste spill wear the required cleanup apparel and use the required surgical masks and duct tape.

Verify that the spill area is secured.

Verify that enough absorbent material is applied in and around the spill area so that all liquid spillage is contained and absorbed.

Verify that damaged containers and spilled biomedical waste are placed in the bags required in the cleanup kit.

Verify that the area is decontaminated and other cleanup measures are taken as appropriate for the situation.

Verify that reusable components of the cleanup kit are cleaned and decontaminated.

Verify that reusable components of apparel and related equipment are cleaned and decontaminated before disrobing.

Verify that apparel and related equipment are removed and disposable items are placed in the bags required in the cleanup kit.

**SO,115.14.CT.** Biomedical waste must be accompanied by a tracking form in order to be accepted at a solid waste facility (Conn. Agencies Regs. 22a-209-15(f)(2)).

Verify that biomedical waste is accompanied by a tracking form that meets requirements for tracking biomedical waste.

## Biomedical Waste Transportation - Small

(NOTE: SQGs of biomedical waste may transport their own waste without a permit provided they meet the requirements listed below and the requirements for



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<p><b>Quantity Generators (SQGs)</b></p> <p><b>SO.115.15.CT.</b> The SQG transporting his waste without a biomedical waste transporter permit must meet packaging, labeling, and marking requirements (Conn. Agencies Regs. 22a-209-15(g)(2)(A) and (b)(4), (7), and (8)).</p> <p><b>SO.115.16.CT.</b> SQGs transporting their waste without biomedical waste transporter permits must meet requirements for personal protective equipment (Conn. Agencies Regs. 22a-209-15(g)(2)(A) and (b)(5)).</p> <p><b>SO.115.17.CT.</b> SQGs transporting their waste without biomedical waste transporter permits must use a lawfully operated solid waste facility or another of the generator's place of business (Conn. Agencies Regs. 22a-209-15(g)(2)(B)).</p> <p><b>SO.115.18.CT.</b> SQGs transporting their waste without biomedical waste transporter permits must meet specific transport requirements (Conn. Agencies Regs. 22a-209-15(g)(2)(C)).</p> <p><b>SO.115.19.CT.</b> SQGs trans-</p>	<p>generators listed in SO.105.1.CT.)</p> <p>Verify that SQGs transporting waste without a biomedical waste transporter permit meet the packaging, labeling, and marking requirements listed in SO.115.3.CT, SO.115.4.CT, and SO.115.5.CT.</p> <p>Verify that persons packaging biomedical waste wear personal protective equipment.</p> <p>Verify that SQGs transporting their waste without biomedical waste transporter permits transport their biomedical waste to one of the following:</p> <ul style="list-style-type: none"> <li>- a lawfully operated solid waste facility where the generator has a written agreement to deliver biomedical waste</li> <li>- another of the generator's places of business in Connecticut.</li> </ul> <p>Verify that SQGs transporting waste without a biomedical waste transporter permit transport the waste themselves or authorizes (in writing) their employees to transport it.</p> <p>Verify that SQGs transporting waste without a biomedical waste transporter permit transport the biomedical waste in a vehicle they own or one that is owned by the authorized employee.</p> <p>Verify that SQGs transporting waste without biomedical waste transporter</p>

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<p>porting their waste without biomedical waste transporter permits must meet recordkeeping requirements (Conn. Agencies Regs. 22a-209-15(g)(2)(D) and (i)(4)).</p> <p><b>SO.115.20.CT.</b> Small quantity biomedical waste generators transporting biomedical waste by the U.S. Postal Service must meet specific requirements (Conn. Agencies Regs. 22a-209-15(g)(3) and (I)(5)) [Revised October 1997].</p>	<p>permits keep a log meeting all the following requirements:</p> <ul style="list-style-type: none"> <li>- an entry for each shipment of biomedical waste</li> <li>- each entry is retained for 3 yr from the date the generator transports waste offsite.</li> </ul> <p>Verify that each log entry consists of all the following:</p> <ul style="list-style-type: none"> <li>- name and address of the solid waste facility where the biomedical waste is transported</li> <li>- weight of untreated and decontaminated biomedical waste transported</li> <li>- date the biomedical waste was transported</li> <li>- signature of the individual transporting the waste.</li> </ul> <p>Determine whether the small quantity biomedical waste generator is causing biomedical waste to be transported by the U.S. Postal Service.</p> <p>(NOTE: The following requirements must be met for SQGs to be exempt from requirements for biomedical waste transporters, tracking biomedical waste, and recordkeeping and reporting for generators, transporters, and solid waste facilities.)</p> <p>Verify that the biomedical waste consists only of discarded used sharps and discarded unused hypodermic needles, scalpels, suture needs, and syringes.</p> <p>Verify that each package of such waste is sent registered mail, return receipt requested, indicating the name and address of the person to whom the waste was sent, the date when it was delivered, and the signature of the recipient.</p> <p>Verify that for each shipment, the original U.S. Postal Service receipt and the return mail receipt are retained for at least 3 yr from the date the waste is shipped.</p> <p>Verify that a log is kept with an entry for each biomedical waste shipment and each entry is maintained for at least 3 yr from the date the waste is mailed.</p> <p>Verify that each log entry includes the weight of untreated and decontaminated biomedical waste mailed, date mailed, and the name and address of the solid waste facility that the waste was mailed to.</p>

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<p><b>MEDICAL WASTE</b></p> <p><b>SO.120.</b></p> <p><b>Treatment/Disposal</b></p> <p><b>SO.120.1.CT.</b> Biomedical waste that is chemotherapy waste must be incinerated (Conn. Agencies Regs. 22a-209-15(f)(3)(A)).</p> <p><b>SO.120.2.CT.</b> Biomedical waste that is pathological waste must be incinerated or interred (Conn. Agencies Regs. 22a-209-15(f)(3)(B)).</p> <p><b>SO.120.3.CT.</b> Disposal of infectious biomedical waste must meet specific requirements (Conn. Agencies Regs. 22a-209-15(f)(3)(C)).</p> <p><b>SO.120.4.CT.</b> Decontaminated biomedical waste that still looks like biomedical waste must meet biomedical waste requirements (Conn. Agencies Regs. 22a-209-15(f)(7)).</p>	<p>Verify that chemotherapy waste is only disposed of by incineration.</p> <p>Verify that pathological waste is disposed of only by incineration or interment.</p> <p>Verify that infectious waste is disposed of in one of the following ways:</p> <ul style="list-style-type: none"> <li>- incineration</li> <li>- discharge to a sanitary sewer, provided that the waste is in liquid or semisolid form, that secondary treatment is available at the publicly owned treatment works or privately owned treatment works where the waste is headed, that local law does not prohibit such a discharge, that all permits and other authorizations required by law have been obtained for such a discharge, and that aerosol formation is minimized during such a discharge to a sanitary sewer .</li> <li>- any other method approved by the Commissioner.</li> </ul> <p>Verify that decontaminated biomedical waste meets biomedical waste requirements.</p> <p>(NOTE: Decontaminated biomedical waste that is so physically altered as to no longer look like biomedical waste does not have to meet biomedical waste requirements.)</p>

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<p><b>SO.120.5.CT.</b> Biomedical waste that is treated and disposed of at the site it was generated must meet management requirements (Conn. Agencies Regs. 22a-209-15(f)(8)).</p> <p><b>Biomedical Waste Incineration</b></p> <p><b>SO.120.6.CT.</b> Delivery, or causing the delivery, of biomedical waste to an incinerator must meet requirements (Conn. Agencies Regs. 22a-209-15(f)(4)(A)).</p> <p><b>SO.120.7.CT.</b> Operation of an incinerator that burns biomedical waste must meet requirements (Conn. Agencies Regs. 22a-209-15(f)(4)(B)).</p> <p><b>SO.120.8.CT.</b> Biomedical waste incinerator residue must be managed as a special waste (Conn. Agencies Regs.</p>	<p>Verify that when biomedical waste is treated or disposed of at the site where it was generated, the generator develops written procedures for each treatment or disposal method in use at the site and for ensuring compliance with the procedures.</p> <p>Verify that the procedures developed are incorporated into the biomedical waste management plan required of each biomedical waste generator.</p> <p>Verify that the procedures developed for treatment or disposal methods used at the site meet all the following requirements:</p> <ul style="list-style-type: none"> <li>- assure the effectiveness of any treatment method in use and reflect acceptable standards of practice.</li> <li>- provide for and conduct an ongoing program of staff training on the implementation of such procedures and biomedical waste requirements</li> <li>- provide for a quality assurance/quality control program to assure compliance with the biomedical waste management plan.</li> </ul> <p>(NOTE: See AE.25 for specific requirements for incinerators.)</p> <p>Verify that no person delivers or causes delivery of biomedical waste to any incinerator, whether outside or inside of Connecticut, unless the incinerator complies with all applicable laws.</p> <p>Verify that no person operates an incinerator where biomedical waste is burned unless the incinerator complies with all applicable laws, including, but not limited to Sections 22a-174-1 through 22a-174-29 of the Regulations of Connecticut State Agencies (<i>Abatement of Air Pollution</i>).</p> <p>Verify that biomedical waste incinerator residue management meets the handling requirements for special waste.</p>

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<p>22a-209-15(f)(5)).</p> <p><b>Biomedical Waste Sterilization</b></p> <p><b>So.120.9.CT.</b> Operation of a gravity flow or vacuum-type steam sterilizer to decontaminate biomedical waste must meet specific requirements (Conn. Agencies Regs. 22a-209-15(f)(6)(A), (B), and (C)).</p> <p><b>SO.120.10.CT.</b> Sterilization of biomedical waste within its primary container must meet requirements (Conn. Agencies Regs. 22a-209-15(f)(6)(D)).</p> <p><b>SO.120.11.CT.</b> Steam sterilizers not equipped to continuously monitor and record temperatures during the sterilization cycle must meet requirements (Conn. Agencies Regs. 22a-209-15(f)(6)(E)).</p> <p><b>SO.120.12.CT.</b> Steam sterilizers must be regularly evaluated for sterilization effectiveness (Conn. Agencies</p>	<p>Verify that in a gravity flow sterilizer, biomedical waste is subject to a temperature of not less than 250°F (121 °C) at 15 psig for no less than 60 min.</p> <p>Verify that in a vacuum-type sterilizer, biomedical waste is subject to a temperature of not less than 270 °F (132 °C) at 27 psig for no less than 45 min.</p> <p>(NOTE: The Commissioner may approve a different combination of operational time, temperature, and pressure for steam sterilization.)</p> <p>Verify that biomedical waste is steam sterilized in its primary container.</p> <p>Verify that the primary container is placed in the sterilization chamber so there is enough space between the chamber walls and the container to allow the steam to penetrate the container.</p> <p>Verify that the primary container is then unsealed to allow the steam to penetrate the contents of the container.</p> <p>Verify that the steam sterilizer operator affixes to the primary container temperature-sensitive tape that will indicate when the desired temperature is reached.</p> <p>(NOTE: Biomedical waste is not considered decontaminated unless the temperature-sensitive tape indicates that at least 250 °F (121 °C) was reached during the sterilization process.)</p> <p>Verify that steam sterilizers used for the first time automatically and continuously monitor and record temperatures throughout the entire length of each sterilization cycle.</p> <p>Verify that steam sterilizer tests are conducted at least once every 40 h to evaluate sterilization process effectiveness, including tests of the capacity of the process to kill <i>Bacillus stearothermophilus</i>.</p>

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<p>Regs. 22a-209-15(f)(6)(F)).</p> <p><b>SO.120.13.CT.</b> Steam sterilizers must be regularly evaluated regarding temperature and pressure (Conn. Agencies Regs. 22a-209-15(f)(6)(G)).</p> <p><b>SO.120.14.CT.</b> Logs must be kept for each sterilization unit (Conn. Agencies Regs. 22a-209-15(f)(6)(H)).</p>	<p>Verify that a log is maintained recording test dates and results.</p> <p>Verify that steam sterilizers are evaluated at least once every 40 h regarding proper operation for temperature and pressure.</p> <p>Verify that a log is maintained recording the dates and results of the evaluations and the calibration dates.</p> <p>Verify that a log is kept for each sterilization unit that maintains (for each use) all the following information:</p> <ul style="list-style-type: none"> <li>- date</li> <li>- time</li> <li>- operator</li> <li>- type and approximate amount of biomedical waste treated</li> <li>- sterilization pressure reading and post-sterilization reading on the temperature sensitive tape.</li> </ul>
<p><b>Biomedical Waste Treatment Facilities</b></p> <p><b>SO.120.15.CT.</b> Biomedical waste treatment facilities must meet permit requirements (Conn. Agencies Regs. 22a-209-10(1) and (2)) [Citation revised October 1997].</p> <p><b>SO.120.16.CT.</b> Biomedical waste treatment facilities must meet access requirements (Conn. Agencies Regs. 22a-209-10(3)) [Citation revised October 1997].</p>	<p>Verify that any biomedical waste treatment facility has a permit and operates within its conditions.</p> <p>Verify that a sign is posted at the facility entrance stating the following:</p> <ul style="list-style-type: none"> <li>- permittee's name</li> <li>- hours of operation</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that access to the facility is controlled through use of appropriate fences, gates, and signs to prevent unauthorized use.</p>

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<p><b>SO.120.17.CT.</b> Biomedical waste treatment facilities must meet storage requirements (Conn. Agencies Regs. 22a-209-10(4)) [Citation revised October 1997].</p>	<p>Verify that no solid waste is stored within the property boundary for more than 48 h.</p> <p>(NOTE: Solid waste storage may exceed 48 h if a legal holiday weekend is involved or if the Commissioner approves lengthier storage times.)</p>
<p><b>SO.120.18.CT.</b> Biomedical waste treatment facilities must meet requirements for working areas (Conn. Agencies Regs. 22a-209-10(5)) [Citation revised October 1997].</p>	<p>Verify that unloading of solid waste takes place only in an enclosed structure and/or designated areas that have been approved by the Commissioner.</p> <p>Verify that scavenging does not occur in the unloading area.</p>
<p><b>SO.120.19.CT.</b> Biomedical waste treatment facilities must control litter (Conn. Agencies Regs. 22a-209-10(6)) [Citation revised October 1997].</p>	<p>Verify that solid waste is confined to the unloading, loading, and handling area.</p> <p>Verify that the facility and adjacent areas are kept clean and reasonably free of litter.</p>
<p><b>SO.120.20.CT.</b> Biomedical waste treatment facilities must meet the requirement for certified operators (Conn. Agencies Regs. 22a-209-10(7)) [Citation revised October 1997].</p>	<p>Verify that a certified operator is present at all times during working hours.</p>
<p><b>SO.120.21.CT.</b> Biomedical waste treatment facilities must exclude specific wastes from their operations (Conn. Agencies Regs. 22a-209-10(8)) [Citation revised October 1997].</p>	<p>Verify that hazardous and special wastes are excluded from facilities or plants.</p> <p>(NOTE: The Commissioner may allow special handling for hazardous and special wastes at facilities or plants.)</p>

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<p><b>SO.120.22.CT.</b> Biomedical waste treatment facilities must meet air quality requirements (Conn. Agencies Regs. 22a-209-10(9)) [Citation revised October 1997].</p>	<p>Verify that air emissions, dust, and odors resulting from the unloading of solid waste and the operation of the facility or plant are controlled at all times to assure compliance with applicable Department for the Abatement of Air Pollution regulations.</p>
<p><b>SO.120.23.CT.</b> Biomedical waste treatment facilities must meet fire control requirements (Conn. Agencies Regs. 22a-209-10(10)) [Citation revised October 1997].</p>	<p>Verify that fire control equipment is provided.</p> <p>Verify that arrangements are made with the local fire protection agency to get services immediately when needed.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when a fire occurs.</p>
<p><b>SO.120.24.CT.</b> Biomedical waste treatment facilities must meet explosion requirements (Conn. Agencies Regs. 22a-209-10(11)) [Citation revised October 1997].</p>	<p>Verify that the facility or plant provides for explosion protection.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when an explosion occurs.</p>
<p><b>SO.120.25.CT.</b> Biomedical waste treatment facilities must meet shutdown requirements (Conn. Agencies Regs. 22a-209-10(12)) [Citation revised October 1997].</p>	<p>Verify that a Commissioner-approved alternative method for the processing or transferring and disposal of solid waste is available if the facility or plant is somehow rendered inoperable.</p> <p>Verify that the Department is notified within 24 h when a shutdown occurs.</p>
<p><b>SO.120.26.CT.</b> Biomedical waste treatment facilities must meet recordkeeping requirements (Conn. Agencies Regs. 22a-209-10(13)) [Citation revised October 1997].</p>	<p>Verify that daily records are kept in a manner acceptable to the Commissioner.</p> <p>Verify that records include each of the following:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each generator of biomedical waste</li> <li>- total weights from other sources</li> <li>- tonnage processed</li> </ul>



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**SO.120.27.CT.** Biomedical waste treatment facilities must meet requirements for temporary facilities (Conn. Agencies Regs. 22a-209-10(14)) [Citation revised October 1997].

- tonnage of residue delivered for disposal and specific sites used
- materials removed for resources recovery and markets used.

Verify that monthly summaries of these records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.

Verify that a facility or plant which will operate for less than 2 yr has a variance.

(NOTE: The Commissioner will prescribe guidelines for the design and operation of facilities or plants that will operate for less than 2 yr.)

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<p><b>MEDICAL WASTE</b></p> <p><b>SO.125. Documentation</b></p> <p><b>SO.125.1.CT.</b> Biomedical waste generators who transport or offer for transport biomedical waste must track the waste (Conn. Agencies Regs. 22a-209-15(h)(1) through (7)).</p> <p><b>SO.125.2.CT.</b> Generators and transporters of biomedical waste must maintain logs (Conn. Agencies Regs. 22a-209-15(i)(3) and (4)).</p>	<p>Verify that generators who transport or offer for transport biomedical waste use the medical waste tracking form to track the movement of the waste from its site of generation to a solid waste facility for the purpose of storage, treatment, or disposal.</p> <p>Verify that copies are provided for the generator, transporter, and the operator of each solid waste facility where the waste is to be treated, stored, or disposed of</p> <p>Verify that the generator of biomedical waste who offers or delivers the waste to a transporter, other than a rail transporter, for transport to a facility outside Connecticut for treatment, storage, or disposal requests that the operator of the facility provide written confirmation that the waste was received.</p> <p>(NOTE: If confirmation is not received within 45 days from the date offered or delivered to the transporter, an exception report must be submitted.)</p> <p>Verify that all biomedical waste offered for transport is accompanied by a tracking form and the transporter verifies the tracking form is accurate for the contents.</p> <p>Verify that small quantity generators of biomedical waste, who use the services of a transporter to transport biomedical waste, and who do not voluntarily prepare the tracking form, comply with the following requirements:</p> <ul style="list-style-type: none"> <li>- compile a log that includes an entry for each shipment of biomedical waste, and maintain each entry for 3 yr from the date the waste is accepted by the transporter</li> <li>- each entry consists of: <ul style="list-style-type: none"> <li>- the transporter's name and address</li> <li>- transporter's state biomedical waste transporter permit number</li> <li>- the weight of untreated and decontaminated biomedical waste transported</li> <li>- the date the waste is delivered to the transporter</li> <li>- the signature of the transporter or his employee, who accepts the waste.</li> </ul> </li> </ul> <p>Verify that small quantity generators of biomedical waste who transport</p>

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biomedical waste without a permit comply with the following:

- compile a log that includes an entry for each shipment of biomedical waste and retains the entry for at least 3 yr from the date the generator transports the waste offsite
- each entry consists of:
  - name and address of the solid waste facility the waste is transported to
  - the weight of untreated and decontaminated biomedical waste transported.

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<b>SO.135.</b> <b>LANDFILLS</b>  <b>Water Protection</b>  <b>SO.135.1.CT.</b> Solid waste facilities must requirements for ground and surface water protection (Conn. Agencies Regs. 22a-209-7(c)(1)) and (2)(A) and (B).	<p>(NOTE: The State of Connecticut uses the undefined terms "solid waste facilities" and "solid waste disposal areas" to refer to landfills.)</p> <p>Verify that a minimum of 60 in. is maintained between the base of deposited solid wastes and the maximum high water table or bedrock.</p> <p>(NOTE: A gap smaller than 60 in. may be allowed by the Commissioner.)</p> <p>Verify that a new or existing solid waste disposal area does not impair the quality of surface or groundwater beyond the solid waste boundary so that the water quality is degraded beyond any of the following:</p> <ul style="list-style-type: none"> <li>- the water quality classification established by the Department</li> <li>- the Connecticut water quality standards and criteria</li> <li>- the standards for quality of public drinking water established by the State Department of Health Services.</li> </ul> <p>Verify that, in those cases where the existing water quality fails to meet the established standards, the disposal area does not further degrade water quality.</p> <p>(NOTE: The Commissioner may designate an alternate boundary, beyond the solid waste boundary, that will serve as the limit for any degradation. The solid waste facility then must not impair the quality of surface or groundwater beyond this alternate boundary.)</p>
<b>SO.135.2.CT.</b> Solid waste facilities must meet grading requirements (Conn. Agencies Regs. 22a-209-7(c)(3)).	<p>Verify that the solid waste disposal area is graded and provided with any necessary drainage facilities so all the following occur:</p> <ul style="list-style-type: none"> <li>- infiltration of rain or surface runoff is minimized</li> <li>- erosion or washing out of areas is prevented</li> <li>- the collection of standing water is prevented.</li> </ul> <p>Verify that the top surface area is graded at all times to a slope of at least 4 percent.</p> <p>Verify that the side slopes do not exceed a grade of 1 vertical or 3 horizontal.</p> <p>(NOTE: The Commissioner may approve different slopes or grades for the top surface area and side slopes.)</p>

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<p><b>SO.135.3.CT.</b> Solid waste facilities in floodplains must meet requirements (Conn. Agencies Regs. 22a-209-7(c)(4)).</p>	<p>Verify that solid waste facilities in floodplains do not do any of the following in a manner hazardous to persons, property, wildlife, land, or water resources:</p> <ul style="list-style-type: none"> <li>- restrict the flow of the base flood</li> <li>- reduce the temporary water storage capacity of the floodplain</li> <li>- result in washout of solid waste.</li> </ul>
<p><b>SO.135.4.CT.</b> Solid waste facilities must meet requirements for avoiding contact between surface water and solid waste (Conn. Agencies Regs. 22a-209-7(c)(5)).</p>	<p>Verify that solid waste does not come in contact with surface waters.</p> <p>Verify that disposal operations are conducted in a manner that minimizes the impact on surface waters.</p>
<p><b>SO.135.5.CT.</b> Solid waste facilities must meet erosion control requirements (Conn. Agencies Regs. 22a-209-7(c)(6)).</p>	<p>Verify that one of the following are used when needed to avoid stream siltation or flooding problems due to excess runoff:</p> <ul style="list-style-type: none"> <li>- siltation or retention basins</li> <li>- other methods approved by the Commissioner for retarding runoff.</li> </ul>
<p><b>SO.135.7.CT.</b> Solid waste facilities must meet ground-water monitoring requirements (Conn. Agencies Regs. 22a-209-7(c)(8)(A) and (C)).</p>	<p>Verify that the following have occurred before the solid waste facility disposal area starts operating:</p> <ul style="list-style-type: none"> <li>- groundwater monitoring system is installed</li> <li>- a sufficient number of surface and groundwater samples and analyses are done to determine baseline water quality information.</li> </ul> <p>Verify that monitoring is performed according to the schedule in the facility plan and/ or the permit to construct.</p> <p>Verify that ground or surface water samples are analyzed by a state-approved laboratory using Commissioner-approved methods.</p> <p>Verify that copies of analyses are forwarded to the Department's Solid Waste Management Unit.</p>
<p><b>SO.135.8.CT.</b> Installations/ CW facilities with inactive or</p>	<p>Verify that, when the Commissioner determines a disposal area could or is</p>

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<p>active solid waste disposal areas must meet requirements for investigating disposal areas suspected of being actual or potential threats to water quality (Conn. Agencies Regs. 22a-209-7(c)(8)(B)).</p> <p><b>Design and Operation</b></p> <p><b>SO.135.9.CT.</b> Solid waste disposal areas must meet requirements for cell construction (Conn. Agencies Regs. 22a-209-7(h)(3)).</p> <p><b>SO.135.10.CT.</b> Installations/CW facilities with solid waste disposal areas must meet access requirements (Conn. Agencies Regs. 22a-209-7(d)).</p> <p><b>SO.135.11.CT.</b> Installations/CW facilities with active and inactive solid</p>	<p>threatening surface or groundwater quality, all the following actions are taken:</p> <ul style="list-style-type: none"> <li>- investigation of the extent and degree of surface and/or groundwater contamination resulting from the disposal of solid wastes</li> <li>- construction and installation plans for a surface and/or groundwater monitoring system are submitted for Commissioner approval</li> <li>- the monitoring system is installed in conformance with the plans, and the plans become part of the facility plan</li> <li>- monitoring is done in accordance to a Commissioner-approved schedule.</li> </ul> <p>Verify that the cell construction method of sanitary landfilling is used.</p> <p>Verify that solid waste is spread and compacted in layers not more than 3 ft thick</p> <p>Verify that each individual cell does not exceed 10 ft in height.</p> <p>(NOTE: The Commissioner may allow cells exceeding 10 ft in height.)</p> <p>Verify that all-weather roads connect public roads or highways and the solid waste disposal area.</p> <p>Verify that all-weather roads are maintained so they are passable by all vehicles using the area.</p> <p>Verify that access to the solid waste disposal area is controlled to prevent unauthorized use.</p> <p>(NOTE: Control can include use of signs, gates, and fences.)</p> <p>Verify that a sign is posted at the facility entrance that states the:</p> <ul style="list-style-type: none"> <li>- name of the permittee</li> <li>- hours of use of the area</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that an installation/CW facility with a disposal area at which smoldering, smoking, or burning is occurring does all of the following:</p>

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<p>waste disposal areas must provide fire protection (Conn. Agencies Regs. 22a-209-7(e)).</p>	<ul style="list-style-type: none"> <li>- immediately notifies the Department Solid Waste Management Unit</li> <li>- if reasonably necessary, obtains firefighting assistance from area fire departments</li> <li>- ensures that firefighting activities continue until all smoldering, smoking, and burning has ceased, as proven by scientific methods acceptable to the Department</li> <li>- ceases all disposal activities in the immediate vicinity of any smoldering, smoking, or burning</li> <li>- takes precautions to prevent disposal activities from interfering with firefighting activities</li> <li>- closes the facility until all smoldering, smoking, and burning has ceased, if required by the Commissioner or local fire officials</li> <li>- recovers and repairs any disruption of the grade or covered compacted surfaces after the firefighting has ceased.</li> </ul>
<p><b>SO.135.12.CT.</b> Installations/CW facilities with active solid waste disposal areas must meet requirements for the working face of the dump (Conn. Agencies Regs. 22a-209-7(h)(1) and (2)).</p>	<p>Verify that the work face is kept as narrow as is consistent with the proper operation of trucks and equipment so the area of waste exposed each operating day is minimal.</p> <p>Verify that the working face does not exceed 150 ft in width when measured across the operating surface of the solid waste disposal area.</p> <p>Verify that no more than one working face is in use at one time.</p> <p>(NOTE: The limit of one working face at a time does not apply to solid waste facilities at which separate areas are designated on the approved facility plan for specific wastes.)</p> <p>Verify that the unloading of solid wastes is restricted and controlled to assure the proper handling of solid wastes.</p> <p>Verify that no scavenging at the working face occurs.</p>
<p><b>SO.135.13.CT.</b> Solid waste facilities must meet requirements for waste collection areas (Conn. Agencies Regs. 22a-209-7(i)).</p>	<p>Verify that disposal area personnel oversee the disposal of waste at waste collection areas.</p> <p>Verify that no scavenging occurs at waste collection areas.</p> <p>Verify that waste collection areas are located a safe distance from all the following:</p> <ul style="list-style-type: none"> <li>- the working face</li> <li>- movement of disposal area equipment</li> <li>- movement of commercial collection and hauling vehicles.</li> </ul>

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<p><b>SO.135.14.CT.</b> Equipment used in solid waste disposal areas must meet requirements (Conn. Agencies Regs. 22a-209-7(j)).</p> <p><b>SO.135.15.CT.</b> Solid waste disposal areas must meet requirements for blowing litter (Conn. Agencies Regs. 22a-209-7(k)).</p> <p><b>SO.135.16.CT.</b> Solid waste disposal areas must meet requirements for cover operations (Conn. Agencies Regs. 22a-209-7(l)).</p>	<p>Verify that no waste remains in the collection area for more than 48 h and all waste is removed from the collection area and deposited in the working face of the disposal area.</p> <p>(NOTE: Portions of the solid waste disposal area used solely for collecting and storing recyclable materials are not subject to waste collection area requirements.)</p> <p>Verify that equipment used for spreading, compacting, and covering is of sufficient size and number to achieve maximum compaction and efficient operation.</p> <p>Verify that provisions are made for the routine operational maintenance of equipment at the solid waste disposal area or elsewhere, and for prompt repair or replacement of equipment.</p> <p>Verify that a contingency plan exists for obtaining alternative equipment or another alternative method of disposal if an equipment breakdown is reasonably expected to last more than 24 h.</p> <p>Verify that the Department is notified of any breakdown reasonably expected to last more than 24 h.</p> <p>Verify that blowing litter is controlled by any of the following means:</p> <ul style="list-style-type: none"> <li>- fencing near the working area</li> <li>- earth banks</li> <li>- other natural barriers acceptable to the Commissioner.</li> </ul> <p>Verify that solid wastes are unloaded so as to minimize scattering.</p> <p>Verify that the entire solid waste disposal area is reasonably clear of litter at the end of each working day.</p> <p>Verify that a standby supply of cover material, equal to 25 percent of the volume of the disposal area consumed in 10 days at normal disposal rates, is stored within the solid waste disposal area boundaries.</p> <p>Verify that the standby supply of cover material is protected from freezing.</p>



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<p><b>SO.135.17.CT.</b> Solid waste disposal areas must meet vector control requirements (Conn. Agencies Regs. 22a-209-7(m)).</p> <p><b>SO.135.18.CT.</b> Solid waste disposal areas must meet requirements for decomposition gas control (Conn. Agencies Regs. 22a-209-7(n)).</p>	<p>Verify that cover material is applied and compacted to a minimum thickness of 6 in. on all exposed wastes at the end of each working day.</p> <p>Verify that, if more than 9 mo is expected to elapse before another lift is added, a layer of intermediate cover material compacted to a minimum uniform depth of 1 ft is placed on the solid waste disposal areas, and vegetative cover is planted in the next planting season and maintained.</p> <p>(NOTE: The final lift is not required to meet intermediate cover requirements.)</p> <p>Verify that a uniform layer of final cover material compacted to a minimum of 2 ft is placed over the entire surface of each portion of the final lift not later than 1 week following the final placement of solid waste in that portion of the area.</p> <p>(NOTE: The facility permit to construct may specify alternate final cover requirements.)</p> <p>Verify that, upon application of final cover, the solid waste disposal area is regraded to prevent erosion and ponding, and vegetative cover is planted in the next planting season and maintained.</p>
	<p>Verify that conditions are unfavorable for the harboring, feeding and breeding of vectors.</p> <p>Verify that additional means for controlling and exterminating vectors are instituted, when required by the Commissioner.</p> <p>Verify that decomposition gases are controlled in a way that avoids posing hazards to persons or property and minimizes adverse environmental effects.</p> <p>Verify that the concentration of methane gases generated by the solid waste disposal area do not exceed the following amounts for the following areas:</p> <ul style="list-style-type: none"> <li>- 25 percent of the lower explosive limit for methane in onsite or offsite structures such as buildings, sheds, and utility or drainage lines but not gas control or recovery system components</li> <li>- the lower explosive limit for methane in the ground at the solid waste disposal area property boundary.</li> </ul> <p>Verify that no new solid waste disposal area begins operations without first installing any gas venting and monitoring system indicated in the approved facility plan.</p>

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<p><b>SO.135.19.CT.</b> Solid waste disposal areas must meet requirements for disposal of specific wastes (Conn. Agencies Regs. 22a-209-7(o)).</p> <p><b>SO.135.20.CT.</b> Solid waste disposal areas must meet recycling requirements (Conn. Agencies Regs. 22a-209-7(p)).</p> <p><b>SO.135.21.CT.</b> Employee facilities at solid waste disposal areas must meet requirements (Conn. Agencies Regs. 22a-209-7(q)).</p>	<p>(NOTE: A phase-in of the gas venting and monitoring system may be allowed if indicated in the facility's permit to construct.)</p> <p>Verify that, if the Commissioner requires it, installations/CW facilities with active, inactive, and closed solid waste disposal areas submit construction and installation plans for a gas monitoring and/or venting system.</p> <p>Verify that any Commissioner-approved plans for a gas monitoring and/or venting system, are installed in conformance with the plans and become part of the facility plan.</p> <p>Verify that monitoring of an active, inactive, or closed solid waste disposal area required to install a gas monitoring and/or venting system by the Commissioner is performed according to a Commissioner-approved schedule.</p> <p>(NOTE: Recovery of methane gases for use as a fuel is not prohibited.)</p> <p>Verify that hazardous wastes are excluded from solid waste disposal areas.</p> <p>(NOTE: Separate facilities at a solid waste disposal area for disposal of certain hazardous wastes may be approved by the Commissioner.)</p> <p>Verify that special wastes, including liquid waste, are excluded from solid waste disposal areas.</p> <p>(NOTE: The Commissioner may allow disposal of special wastes and liquid wastes in a solid waste disposal area.)</p> <p>Verify that materials to be recycled are maintained in a separate area and do not interfere with disposal operations.</p> <p>Verify that materials held for recycling are adequately screened from view or are removed at frequent intervals.</p> <p>Verify that the solid waste facility has all of the following at or adjacent to the disposal area:</p> <ul style="list-style-type: none"> <li>- adequate shelter and restroom facilities for employees</li> <li>- first aid supplies</li> <li>- telephone or two-way radio communication equipment.</li> </ul>

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<p><b>SO.135.22.CT.</b> Solid waste disposal areas must meet air quality requirements (Conn. Agencies Regs. 22a-209-7(r)).</p>	<p>Verify that dust and odors from solid waste disposal area operations are controlled at all times to assure compliance with Department for the Abatement of Air Pollution regulations.</p> <p>Verify that any burning of solid waste complies with Department for the Abatement of Air Pollution regulations regarding open burning.</p>
<p><b>SO.135.23.CT.</b> Solid waste disposal areas must meet bird hazard requirements (Conn. Agencies Regs. 22a-209-7(s)).</p>	<p>Verify that any of the following solid waste disposal areas disposing of putrescible wastes operate in a manner that does not pose a bird hazard to aircraft:</p> <ul style="list-style-type: none"> <li>- located within 10,000 ft of any public airport runway used by turbojet aircraft</li> <li>- located within 5000 ft of any public airport runway used by only piston-type aircraft.</li> </ul> <p>Verify that affirmative measures for bird hazard control are taken as necessary.</p>
<p><b>SO.135.24.CT.</b> Solid waste disposal areas must meet a screening requirement (Conn. Agencies Regs. 22a-209-7(t)).</p>	<p>Verify that the best practical effort is made to screen the solid waste disposal area's working face from view from surrounding residential or business areas.</p>
<p><b>SO.135.25.CT.</b> Installations/CW facilities must meet requirements for disruption of solid waste disposal areas (Conn. Agencies Regs. 22a-209-7(u)).</p>	<p>Verify that the Commissioner approves any excavation, disruption or removal of deposited material at an active, inactive, or closed solid waste disposal area.</p> <p>Verify that all excavation is confined to an area consistent with the number of pieces of digging equipment and/or trucks used for haulage.</p> <p>Verify that all adequate measures are taken to protect the public's health and to control dust, odors, fires, vectors, and blowing litter.</p> <p>Verify that disposal of all solid waste resulting from excavation conforms with these solid waste management requirements.</p>
<p><b>SO.135.26.CT.</b> Solid waste disposal areas must meet requirements for protecting</p>	<p>Verify that solid waste facilities or practices do not cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife.</p> <p>Verify that the facility or its practices do not result in destruction or adverse</p>

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<p>endangered species (Conn. Agencies Regs. 22a-209-7(v)).</p>	<p>modification of the critical habitat of endangered or threatened species as identified in 50 CFR 17.</p> <p>(NOTE: As used in subsection 50 CFR 17, destruction or adverse modification means a direct or indirect alteration of critical habitat that appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat. Taking means harassing, harming, pursuing, hunting, wounding, killing, trapping, capturing, or collecting or attempting to engage in such conduct.)</p>
<p><b>SO.135.27.CT.</b> Solid waste disposal areas must meet requirements for fill limit markers (Conn. Agencies Regs. 22a-209-7(w)).</p> <p><b>Recordkeeping</b></p> <p><b>SO.135.28.CT.</b> Installations/CW facilities must meet recordkeeping requirements for solid waste disposed of at a solid waste disposal area (Conn. Agencies Regs. 22a-209-7(f)).</p>	<p>Verify that the following areas are staked with Commissioner-approved markers:</p> <ul style="list-style-type: none"> <li>- permitted lateral fill limits of a new solid or special waste disposal area</li> <li>- unused portions of an active solid or special waste disposal area.</li> </ul> <p>Verify that the markers are located so neighboring markers can be easily seen.</p> <p>Verify that solid waste is not deposited beyond the line between neighboring markers.</p> <p>Verify that daily records are maintained in a manner acceptable to the Commissioner.</p> <p>Verify that the daily records include:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each municipality using the site</li> <li>- total weights from other sources</li> <li>- the tonnage of materials removed for resources recovery and the markets used.</li> </ul> <p>Verify that the daily records are available for inspection by Department representatives at any reasonable time.</p> <p>Verify that monthly summaries of the daily records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p> <p>Verify that updated topographic mapping of fill areas performed in compliance with permits is submitted annually to the Commissioner for regional solid waste</p>

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	disposal areas.  (NOTE: The Commissioner may require updated topographic mapping of fill areas from nonregional solid waste disposal areas.)

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<p><b>SO.160. WASTE TIRES FACILITIES</b></p> <p><b>SO.160.1.CT.</b> Scrap tires must be handles according to specific requirements (Conn. Agencies Regs. 22a-209-8(g)).</p>	<p>Verify that any facility disposing of scrap tires has a solid waste facility permit.</p> <p>Verify that scrap tires are handled in the following manner:</p> <ul style="list-style-type: none"> <li>- operations are provided with fire prevention and control measures which the Commissioner deems adequate, including the provision of security fencing, 50- ft wide fire lanes, heavy duty fire extinguishers, and hydrants or fire ponds</li> <li>- arrangements are made with the local fire department for services as needed</li> <li>- a scrap tire storage or processing facility plan is submitted to the Commissioner for approval.</li> </ul>

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**REGULATORY REQUIREMENTS:**

**REVIEWER CHECKS:**  
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**SO.165.**  
**YARD WASTE/**  
**COMPOSTING**

(NOTE: Persons who practice sheet leaf composting are exempt from these requirements if the following conditions are met:

- has been issued an Agricultural Sales Tax Exemption Permit
- complies with reporting requirements for recycling facilities
- notified the Commissioner on a specific form within 30 days before accepting leaves for sheet leaf composting.)

- (NOTE: Persons who practice sheet leaf composting are exempt from these requirements if the following conditions are met:
- has been issued an Agricultural Sales Tax Exemption Permit
  - complies with reporting requirements for recycling facilities
  - notified the Commissioner on a specific form within 30 days before accepting leaves for sheet leaf composting.)

**SO.165.1.CT.** Leaf composting facilities must be registered with the Commissioner (Conn. Agencies Regs. 22a-208i-1(c)).

Verify that leaf composting facilities are registered with the Commissioner and the Commissioner has issued a notice to that effect.

(NOTE: If by 16 February 1994 the facility had submitted the equivalent information as required for registration or had been issued a permit, they need not register the leaf composting facility. However, the facility must register the leaf composting facility within 90 days of the expiration of any permit.)

Verify that leaf composting facilities are registered with the Commissioner and the Commissioner has issued a notice to that effect.

(NOTE: If by 16 February 1994 the facility had submitted the equivalent information as required for registration or had been issued a permit, they need not register the leaf composting facility. However, the facility must register the leaf composting facility within 90 days of the expiration of any permit.)

Verify that the following information is submitted for registration:

- name, business address, and business telephone number of the leaf composting facility's owner, the operator, and the owner of the land
- location of the leaf composting facility
- acreage of the property on which the leaf composting facility is located
- volume of leaves composted or expected to be composted annually
- acreage of area used or to be used for a compost pad, leaf processing activities, and storage of leaf compost
- individual to be the primary contact with the Department
- name, business, address, and business telephone number of any engineer or other consultant employed or retained to design and/or oversee construction of and/or operate the leaf composting facility
- a detailed site plan and supporting maps
- an operation and maintenance plan
- such additional information relevant to the facility as the Commissioner deems appropriate.

- Verify that the following information is submitted for registration:
- name, business address, and business telephone number of the leaf composting facility's owner, the operator, and the owner of the land
  - location of the leaf composting facility
  - acreage of the property on which the leaf composting facility is located
  - volume of leaves composted or expected to be composted annually
  - acreage of area used or to be used for a compost pad, leaf processing activities, and storage of leaf compost
  - individual to be the primary contact with the Department
  - name, business, address, and business telephone number of any engineer or other consultant employed or retained to design and/or oversee construction of and/or operate the leaf composting facility
  - a detailed site plan and supporting maps
  - an operation and maintenance plan
  - such additional information relevant to the facility as the Commissioner deems appropriate.

Verify that the leaf composting facility is reregistered if any of the following events occur:

- the annual volume of leaves to be composted increases by 20 percent of the annual volume indicated in the current registration
- the design of the leaf composting facility, or procedures or processes for leaf composting, are modified
- there is a change in the identify of the leaf composting facility's owner or operator.

- Verify that the leaf composting facility is reregistered if any of the following events occur:
- the annual volume of leaves to be composted increases by 20 percent of the annual volume indicated in the current registration
  - the design of the leaf composting facility, or procedures or processes for leaf composting, are modified
  - there is a change in the identify of the leaf composting facility's owner or operator.

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.165.2.CT.</b> Leaf composting facilities must meet specific siting requirements (Conn. Agencies Regs. 22a-208i-1(d)).</p>	<p>Verify that the location of any leaf composting facility meets the following criteria:</p> <ul style="list-style-type: none"> <li>- there are at least 100 ft between the staging, processing, curing, and storage areas and any surface water</li> <li>- there are at least 100 ft between the staging, processing, curing, and storage areas and the boundaries of the property at which the leaf composting facility is located</li> <li>- there are at least 250 ft between the staging, processing, curing, and storage areas and any occupied building other than an owner occupied building on the property at which the leaf composting facility is located</li> <li>- there are at least 5 ft between the ground surface and the seasonal high groundwater table</li> <li>- there are at least 5 ft between the ground surface and bedrock</li> <li>- there are at least 250 ft between the staging, processing, curing, and storage areas and any drinking water supply well.</li> </ul> <p>Verify that leaf composting facilities which are located on top of closed solid waste disposal areas are conducted on a pad to prevent disruption of the landfill cap and underlying waste.</p> <p>Verify that this pad is constructed of well compacted, well drained soil no less than 2- ft thick and sloped at 2-5 percent to promote drainage.</p>
<p><b>SO.165.3.CT.</b> Leaf composting facilities must meet specific operating requirements (Conn. Agencies Regs. 22a-208i-1(e)).</p>	<p>Verify that the following general operating procedures are met:</p> <ul style="list-style-type: none"> <li>- the leaf composting facility is operated in accordance with the information provided in the current registration materials</li> <li>- if located on a solid waste disposal area, it is operated so as not to interfere with operations of the disposal area or to disturb the cover of the disposal area</li> <li>- operated so as to prevent adverse impacts to public health, safety, welfare, and the environment</li> <li>- all composting takes place on a compost pad with a slope of between 2 percent and 5 percent and graded to minimize ponding</li> <li>- leaves in plastic bags are debagged within 2 weeks after arrival and empty plastic bags are promptly removed and lawfully disposed</li> <li>- leaves are stockpiled for no longer than 2 weeks before the leaves are watered, processed, and formed into actively composting windrows</li> <li>- adequate measures are implemented to minimize dust and fungal spore migration</li> <li>- access is maintained so as to permit orderly entrance and egress at all times, including during periods of peak usage and inclement weather</li> <li>- security measures are adequate to prevent unauthorized dumping and</li> </ul>



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	<p>vandalism</p> <ul style="list-style-type: none"> <li>- the facility is maintained in such a manner as to prevent the creation of litter and the harboring, feeding, or breeding of vectors.</li> </ul> <p>Verify that the following operating procedures for windrows are met:</p> <ul style="list-style-type: none"> <li>- constructed on the compost pad perpendicular to the contours of the ground surface</li> <li>- layout allows access for heavy equipment</li> <li>- height and width is such that the leaves may be easily and thoroughly mixed by the windrow turning equipment used</li> <li>- in no case does the height exceed 12 ft or the width exceed 20 ft at their base unless a specialized windrow turning machine is used to mix them and manufacturer specifications recommend specific sizes</li> <li>- turned as often as necessary, and at least once per month, to maintain aerobic composting conditions, prevent foul odors, and produce a compost product</li> <li>- internal temperature is measured and recorded at least once every 14 days at 50 ft intervals with the thermometer inserted into the center of the windrow when internal temperature is measured</li> <li>- all drainage ditches, evaporation ponds, sedimentation ponds and swales are a sufficient distance from the windrows to prevent absorption of water by leaves or leaf compost.</li> </ul> <p>Verify that the following parameters are recorded at least once every 2 weeks and during windrow turning:</p> <ul style="list-style-type: none"> <li>- weather conditions</li> <li>- wind direction</li> <li>- ambient air temperature</li> <li>- presence of odor or dust</li> <li>- compost pad condition</li> <li>- windrow moisture</li> <li>- corrective actions needed</li> <li>- corrective actions taken.</li> </ul> <p>Verify that the following operating procedures for erosion and sedimentation control are met:</p> <ul style="list-style-type: none"> <li>- all appropriate sedimentation and erosion control measures are implemented and designed in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control, as amended, published by the Soil and Water Conservation Council</li> <li>- all interceptor berms, ditches, and swales are installed upgradient of the compost pad when the compost pad is located down gradient of a slope, and surface drainage is diverted away from the compost pad</li> <li>- drainage control measures are implemented to prevent runoff from the compost pad from entering surface water.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<b>SO.165.4.CT.</b> Leaf composting facilities must meet specific reporting requirements (Conn. Agencies Regs. 22a-208i-1(f)).	Verify that leaf composting facilities meet the reporting requirements for recycling facilities pursuant to Section 22a-208e(c) of the Connecticut General Statutes.
<b>SO.165.5.CT.</b> Installations/CW facilities practicing sheet leaf composting must meet specific operating requirements (Conn. Agencies Regs. 22a-208i-1(g)(2)).	Verify that the following procedures are followed: <ul style="list-style-type: none"> <li>- no material other than leaves is used for sheet leaf composting</li> <li>- conducted only at land actively devoted to agricultural production</li> <li>- leaves to be used are delivered to the subject land unbagged</li> <li>- prior to application of leaves to land, any non-leaf material intermixed with the leaves is removed and properly disposed</li> <li>- leaves to be used are applied to land within 14 days of delivery and are spread in a layer no higher than 6 in.</li> <li>- no land receives more than 6 in. of leaves within any 12 mo</li> <li>- all leaves applied are incorporated into the soil no later than the tillage season following the time the leaves were applied, unless the leaves are intended as a ground mulch.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.175. OTHER TREATMENT UNITS</b></p> <p><b>Residue Disposal</b></p> <p><b>SO.175.1.CT.</b> Installations/ CW facilities with solid waste disposal areas that plan to accept residue for disposal must meet requirements (Conn. Agencies Regs. 22a- 209-14(a), (b)(6) and (c)).</p> <p><b>SO.175.2.CT.</b> Solid waste disposal areas that accept residue must utilize monocells (Conn. Agencies Regs. 22a-209-14(d)(1)).</p> <p><b>SO.175.3.CT.</b> No solid waste other than residue must be deposited in or above the actual limit of the residue monocell in disposal areas that accept residue (Conn. Agencies Regs. 22a-209- 14(d)(2)).</p>	<p>Verify that only solid waste disposal areas meeting all the following conditions are used to dispose of residue:</p> <ul style="list-style-type: none"> <li>- having a permit to discharge leachate, or where the disposal area is in compliance with an order issued under Chapter 446K of the General Statutes</li> <li>- having a permit that specifically authorizes the disposal of residue, issued either before or after February 1990</li> <li>- where groundwater, including water at the zone of influence, is classified GC by water quality standards.</li> </ul> <p>(NOTE: Applications for permits to construct and operate solid waste disposal areas for the disposal of residue may propose alternate technologies or ask the Commissioner for an amendment of the pertinent groundwater classification if the groundwater is not GC.)</p> <p>Verify that residue is disposed of in monocells.</p> <p>Verify that the number of monocells at a disposal area is adequate for the size and configuration of the disposal area.</p> <p>Verify that enough monocells are equipped with pan lysimeters or similar devices to allow a reliable determination of the quantity and quality of leachate generated by the residue at the disposal area.</p> <p>Verify that no solid waste other than residue is deposited in or above the actual limit of a monocell where residue has been placed.</p> <p>(NOTE: The Commissioner may allow deposit of solid waste other than residue in or above the actual limit of the residue monocell under certain conditions.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.175.4.CT.</b> Solid waste disposal areas accepting residue must meet groundwater monitoring requirements (Conn. Agencies Regs. 22a-209-14(d)(3)).</p>	<p>Verify that the groundwater monitoring requirements of Conn. Agencies Regs. 22a-430-4(C)(20)(e) of the Regulations of Connecticut State Agencies are met, including monitoring of dioxin in groundwater.</p>
<p><b>SO.175.5.CT.</b> Installations/CW facilities with closed solid waste disposal areas that accept residue must meet additional postclosure requirements when ordered to by the Commissioner (Conn. Agencies Regs. 22a-209-14(e)(7)).</p>	<p>(NOTE: In addition to the postclosure monitoring and maintenance period required by a permit for a disposal area accepting residue, the Commissioner may require the installation/CW facility to do additional inspection, monitoring, and maintenance of the closed disposal area.)</p> <p>Verify that the installation/CW facility being considered by the Commissioner for additional inspection, monitoring, and maintenance beyond what is required in its permit publishes a notice of a hearing on the issue at least 30 days before the hearing.</p> <p>Verify that the dewatering process meets both the following conditions:</p> <ul style="list-style-type: none"> <li>- residue is dewatered to the maximum extent achievable by gravity dewatering, regardless of the dewatering process used</li> <li>- residue is dewatered to the extent necessary to prevent residue from becoming airborne.</li> </ul> <p>Verify that effluent from the dewatering of residue is discharged in accordance with a water discharge permit.</p>
<p><b>SO.175.6.CT.</b> Installations/CW facilities that manage or transport residue must meet dewatering requirements (Conn. Agencies Regs. 22a-209-14(f)(1)).</p>	<p>Verify that resource recovery facilities, municipal solid waste incinerators, and biomedical waste incinerators dewater residue before shipping it to a solid waste disposal area, in accordance with any Commissioner-approved plan.</p> <p>Verify that the residue is dewatered to the maximum extent achievable by use of gravity dewatering and to the extent necessary to prevent such residue from becoming airborne.</p> <p>Verify that effluent from the process of dewatering residue is discharged in accordance with a water discharge permit.</p>
<p><b>SO.175.7.CT.</b> Installations/CW facilities with solid waste</p>	<p>Verify that residue is transported to the disposal area using Commissioner-</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p>disposal areas must meet transportation requirements (Conn. Agencies Regs. 22a-209-14(f)(2)).</p> <p><b>SO.175.8.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must meet recordkeeping requirements (Conn. Agencies Regs. 22a-209-14(f)(3)).</p>	<p>approved equipment and procedures.</p> <p>Verify that the equipment is designed to prevent leakage, spillage, and dispersion of residue during transportation.</p> <p>Verify that records are kept at the disposal area about the weight, origin, and location of the cell used for disposal of each load of residue received at the disposal area.</p> <p>Verify that the installation/CW facility submits to the Commissioner on 1 January, 1 April, 1 July, and 1 October a summary of information in all the records generated during the preceding 3 mo.</p>
<p><b>Liner Systems For Residue Disposal</b></p> <p><b>SO.175.9.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must have liner systems (Conn. Agencies Regs. 22a-209-14(g)(1)).</p>	<p>Verify that any solid waste disposal area accepting residue has a liner system that includes a leachate treatment and discharge system.</p> <p>Verify that the liner system consists of all the following:</p> <ul style="list-style-type: none"> <li>- protective cover</li> <li>- leachate collection system</li> <li>- primary liner</li> <li>- leachate leak detection zone</li> <li>- secondary liner</li> <li>- subbase.</li> </ul> <p>(NOTE: Some disposal areas may not be required to have liner systems or meet liner system requirements.)</p>
<p><b>SO.175.10.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must not begin work on a liner system without permits (Conn. Agencies Regs. 22a-209-14(g)(4)).</p>	<p>Verify that no site preparation or construction for a liner system begins before a permit to construct is obtained.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.175.11.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must meet design and operation requirements (Conn. Agencies Regs. 22a-209-14(h) and (i)).</p>	<p>Verify that the disposal area is designed to minimize stormwater infiltration into the soil and leachate production.</p> <p>Verify that the disposal area is designed and operated to provide for the final cover, grading, and stabilization.</p>
<p><b>SO.175.12.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must meet requirements for protecting the liner (Conn. Agencies Regs. 22a-209-14(j)).</p>	<p>Verify that any means are used (including inspection of disposed material) to ensure that no residue deposited in a cell contains material capable of penetrating or puncturing the liner.</p>
<p><b>SO.175.13.CT.</b> Installations/CW facilities with solid waste disposal areas accepting residue must meet requirements for discharging leachate (Conn. Agencies Regs. 22a-209-14(k)).</p>	<p>Verify that the installations/CW facilities discharging leachate from leachate collection or leachate treatment systems have water discharge permits and meet all permit conditions.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.180. CLOSURE OF SOLID WASTE FACILITIES</b></p> <p><b>SO.180.1.CT.</b> Installations/ CW facilities planning to close solid waste facilities must meet the notification requirement (Conn. Agencies Regs. 22a-209-13(a)).</p> <p><b>SO.180.2.CT.</b> Installations/ CW facilities closing solid waste facilities must submit certain information to the Commissioner for approval (Conn. Agencies Regs. 22a- 209-13(b) and (c)).</p> <p><b>SO.180.3.CT.</b> Installations/ CW facilities with closed solid waste or special waste disposal areas must file cer- tain information with the municipality and the Com- missioner (Conn. Agencies Regs. 22a-209-13(f) and (g)).</p>	<p>Verify that the Commissioner is notified of an intent to close a solid waste facility at least 60 days before closure when there is not an order to close.</p> <p>(NOTE: The Commissioner may require action or information that he or she deems necessary to ensure the proper closing of the facility.)</p> <p>Verify that detailed information concerning use of the site following closing is submitted to the Commissioner for approval.</p> <p>Verify that the Commissioner's approval of the detailed information is obtained before any use is made of the site.</p> <p>Verify that the installation/CW facility submits to the Department a complete set of as-built drawings of the area within 90 days of the closing.</p> <p>Verify that the installation/CW facility records a detailed disposal area description in the appropriate municipal land records.</p> <p>Verify that the following information is sent to the Commissioner:</p> <ul style="list-style-type: none"> <li>- copy of the detailed disposal area description, certified by the municipal clerk</li> <li>- a notation of the volume and page reference of the deed to the property where the disposal area is located</li> <li>- description of the general types and locations of wastes on the site</li> <li>- depth of fill</li> <li>- depth and type of cover material</li> <li>- dates the disposal area was in use</li> <li>- area of potential impacted groundwater, as defined in the facility plan submitted with the permit to construct application</li> <li>- other information deemed necessary by the Commissioner.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>SO.180.4.CT.</b> Installations/ CW facilities with closed solid waste or special waste disposal areas must get Com- missioner approval in order to shift responsibility for postclosure maintenance and monitoring (Conn. Agencies Regs. 22a-209-13(h)).</p>	<p>Verify that installations/CW facilities wanting to transfer responsibility for postclosure maintenance and monitoring of closed waste disposal areas get the Commissioner approval.</p>



## SECTION 10

### STORAGE TANK MANAGEMENT

Connecticut Supplement, October 1997

This section covers the state requirements for Storage Tank Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Abandoned* -
  1. rendered permanently unfit for use (Conn. Agencies Regs. 22a-449(d)-1(a)(2) and 22a-449(d)-1(a)(2)).
  2. rendered permanently closed and unfit for use, in accordance with subsection 22a-449(d)-107(b) of these regulations (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Abnormal Loss or Gain* -
  1. an apparent loss or gain in liquid exceeding 0.5 percent of either of the following (Conn. Agencies Regs. 22a-449(d)-1(a)(2):
    - A. the volume of product used or sold by the owner or operator during any seven consecutive day period
    - B. the volumetric capacity of the tank or container, whichever is greater, as determined by reconciliation of inventory measurements made in accordance with Conn. Agencies Regs. 22a-449(d)-1(g)
  2. an apparent loss or gain in liquid exceeding 0.5 percent of (1) the volume of product used or sold by the owner or operator during any seven consecutive day period, or (2) the volumetric capacity of the tank or container, whichever is greater, as determined by reconciliation of inventory measurements made in accordance with subsection 22a-449(d)-1(g) of these regulations (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
  3. an apparent loss or gain in liquid exceeding 0.5 percent of (1) the volume of product used or sold by the owner or operator during any seven consecutive day period, or (2) the volumetric capacity of the tank or container, whichever is greater, as determined by reconciliation of inventory measurements made in accordance with section 22a-449(d)-104 of these regulations (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Aboveground Release* - any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the above-ground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Ancillary Equipment* - any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Approved Control System* - a vapor balance system or a vapor recovery system (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Belowground Release* - any release to the subsurface of the land and to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank (Conn. Agencies Regs. 22a-449(d)-101(d)).

- *Beneath the Surface of the Ground* - beneath the ground surface or otherwise covered with earthen materials (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Cathodic Protection* - a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Cathodic Protection Tester* - a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *CERCLA* - the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *CFR* - the Code of Federal Regulations revised as of 1 July 1991, unless otherwise specified (Conn. Agencies Regs. 22a-449(d)-1(a)(2) and Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Commissioner* - the Commissioner of Environmental Protection of the State of Connecticut, or the Commissioner's designee (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Compatible* - the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Connected Piping* - all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Consumptive Use with Respect to Heating Oil* - consumed on the premises (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Corrosion Expert* - a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Day* - calendar day, unless otherwise specified (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Delivery Vehicle* - a tank truck, tank-equipped trailer, railroad tank car, or other mobile source equipped with a storage tank used for the transportation of gasoline from sources of supply to any stationary storage tank (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Department or DEP* -
  1. the Department of Environmental Protection (Conn. Agencies Regs. 22a-174-1)
  2. the Connecticut Department of Environmental Protection (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Dielectric Material* - a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate

portions of the UST system including, but not limited to, tank from piping (Conn. Agencies Regs. 22a-449(d)-101(d)).

- *Discharge* - the emission of any water, substance or material into the waters of the state, whether or not such substance causes pollution (Conn. Agencies Regs. 22a-449(d)-1(a)(2); Conn. Agencies Regs. 22a-449(d)-1(a)(2) and 22a-449(d)-101(d)).
- *Dispensing Facility* - any site where gasoline is delivered to motor vehicles other than agricultural vehicles from any stationary storage tank with a capacity of 250 gal or more (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Electrical Equipment* - underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Excavation Zone* - the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Existing Facility* - a facility the construction or installation of which began prior to 1 November 1985, including, but not limited to, facilities which are abandoned and facilities which are temporarily out-of-service (Conn. Agencies Regs. 22a-449(d)-1(a)(2) and 22a-449(d)-1(a)(2)).
- *Existing Tank System* - a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before 22 December 1988. Installation is considered to have commenced if the owner or operator has obtained all Federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if:
  1. either a continuous onsite physical construction or installation program has begun
  2. the owner or operator has entered into contractual obligations--which cannot be canceled or modified without substantial loss--for physical construction at the site or installation of the tank system to be completed within a reasonable time (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Facility* - a system of interconnected tanks, pipes, pumps, vaults, fixed containers, and appurtenant structures, singly or in any combination that are used or designed to be used for the storage, transmission or dispensing of oil or petroleum liquids, including any monitoring devices. As used in Conn. Agencies Regs. Section 22a-449(d)-1 of these regulations, the term facility refers only in to nonresidential underground facilities (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Failure* -
  1. a condition that can or does allow the uncontrolled passage of liquid into or out of a facility, and includes but is not limited to a discharge to the waters of the state without a permit issued pursuant to Section 22a-430 of the General Statutes (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  2. a condition that can or does allow the uncontrolled passage of liquid into or out of an UST system, and includes but is not limited to a discharge to the waters of the state without a permit issued pursuant to Section 22a-430 of the General Statutes (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Failure Determination* - the evaluation of a facility component in accordance with Conn. Agencies Regs. 22a-449(d)-1(i) of these regulations to determine whether a failure has occurred (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Farm Tank* - a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank shall be located on the farm property. Farm includes fish hatcheries, rangeland and nurseries with growing operations (Conn. Agencies Regs. 22a-449(d)-101(d)).

- *Flammable Liquid* - a flammable liquid as determined in accordance with NFPA 30 and having a flash point below 100 F (37.8 C) and having a vapor pressure not exceeding 40 psia (2068 mm Hg) at 100 F (37.8 C) (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Flow-Through Process Tank* - a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flowthrough process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or byproducts from the production process (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Free Product* - a regulated substance that is present as a nonaqueous phase liquid including, but not limited to, liquid not dissolved in water (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Gasoline* - any petroleum distillate having a Reid vapor pressure of four pounds or greater and used as a motor vehicle fuel (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Gasoline Storage Tank Farm* - a premise with any individual gasoline storage tank with a capacity equal to or greater than 40,000 gal (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Gathering Lines* - any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Hazardous Substance UST System* - an underground storage tank system that contains a hazardous substance defined in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 but not including any substance regulated as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act or any mixture of such substances and petroleum, and which is not a petroleum UST system (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Heating Oil* - petroleum that is No. 1, No. 2, No. 4-light, No. 4-heavy, No. 5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Hydraulic Lift Tank* - a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Implementing Agency* - the Connecticut Department of Environmental Protection (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Life Expectancy* -
  1. the time period within which a failure is not expected to occur as determined in accordance with subsection 22a-449(d)-1(h) of these regulations (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  2. the period of time within which a failure is not expected to occur as determined in accordance with section 22a-449(d)-111 (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Life Expectancy Determination* -
  1. the evaluation of a facility component in accordance with Conn. Agencies Regs. 22a-449(d)-1(h) to determine its life expectancy (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  2. the evaluation of a facility component in accordance with subsection 22a-449(d)-1(h) of these regulations to determine its life expectancy (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  3. the evaluation of an UST system component in accordance with section 22a-449(d)-111 to determine its life expectancy (Conn. Agencies Regs. 22a-449(d)-101(d)).

- *Liquid* - any fluid, including, but not limited to, oil and petroleum fluids (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Liquid Trap* - sumps, well cellars, and other traps used in association with oil and gas production, gathering and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Listed* - included in a list published by a testing laboratory which (Conn. Agencies Regs. 22a-449(d)-1(a)(2):
  1. is approved by the Commissioner of Environmental Protection in consultation with the Bureau of the State Fire Marshal
  2. maintains periodic inspection of production of listed equipment or materials
  3. states in their listing either that the equipment, material or procedure meets appropriate standards or has been tested and found suitable for use in a specified manner.
- *Maintenance* - the normal operational upkeep to prevent an underground storage tank system from releasing product (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Motor Fuel* - petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *New Facility* - a facility the construction or installation of which begins on or after 1 November 1985, including, but not limited to, facilities that replace existing facilities, facilities that are moved from one location to another, facilities that are abandoned, and facilities that are temporarily out-of-service (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *New Tank System* - a tank system that shall be used to contain an accumulation of regulated substances and for which installation has commenced after 22 December 1988, including UST systems that are moved from one location to another (See also Existing Tank System) (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *NFPA 30* - National Fire Protection Association publication number 30 entitled, Flammable and Combustible Liquids Code, as enforced by the State Fire Marshal pursuant to Section 29-320 of the Connecticut General Statutes and Conn. Agencies Regs. 29-320-1, 29-320-2, and 29-320-3, as of the effective date of these regulations (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *NFPA 329* - National Fire Protection Association publication number 329 entitled, Underground Leakage of Flammable and Combustible Liquids, as enforced by the state fire marshal pursuant to Section 29-320 of the Connecticut General Statutes and Conn. Agencies Regs. 29-320-1, 29-320-2, and 29-320-3, as of the effective date of these regulations (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Noncommercial Purposes with Respect to Motor Fuel* - not for resale (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Nonresidential (When Referring to a Facility)* - a facility which serves any commercial, industrial, institutional, public or other building, including, but not limited to, hotels and motels, boarding houses, hospitals, nursing homes and correctional institutions, but not including residential buildings (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Oil or Petroleum Liquid or Product* - oil or petroleum of any kind in liquid form including, but not limited to, waste oils and distillation products such as fuel oil, kerosene, naphtha, gasoline and benzene (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).

- *On the Premises Where Stored with Respect to Heating Oil* - UST systems located on the same property where the stored heating oil is used (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Operational Life* - the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under section 22a- 449(d)-107 of these regulations (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Operator* -
  1. the person or municipality in control of, or having responsibility for, the daily operation of a facility (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  2. any person in control of, or having responsibility for, the daily operation of the UST system (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Overfill Release* - a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Owner* -
  1. the person or municipality in possession of or having legal ownership of a facility (Conn. Agencies Regs. 22a-449(d)-1(a)(2))
  2. the person or municipality in possession of or having legal ownership of an UST system (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Person* - an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. Person also includes a consortium, a joint venture, a commercial entity, and the United States Government (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Petroleum UST System* - an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Pipe or Piping* - a hollow cylinder or tubular conduit that is constructed of nonearthen materials (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Pipeline Facilities (Including Gathering Lines)* - new and existing pipe rights-of-way and any associated equipment, facilities, or buildings (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Regulated Substance* -
  1. any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C of the Resource, Conservation and Recovery Act)
  2. petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 °F and 14.7 psia).

The term regulated substance includes, but is not limited to, petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Reid Vapor Pressure or RVP* - the vapor pressure of a liquid in lb/in.<sup>2</sup> at 100 °F as determined by American Society for Testing and Materials method D323-82 Standard Method for Vapor Pressure of Petroleum Products (Reid Method) (Conn. Agencies Regs. 22a-174-20(a)(1)).

- *Release* - any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Release Detection* - determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Repair* - restore a tank or UST system component that has caused a release of product from the UST system (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Residential Building* - any house, apartment, trailer, mobile home, or other structure occupied by individuals as a dwelling provided that if the structure is not used solely as a dwelling, the nominal capacity of the facility, exclusive of piping, serving such structure does not exceed 2100 gal (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Residential Tank* - a tank located on property used primarily for dwelling purposes (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *SARA* - the Superfund Amendments and Reauthorization Act of 1986 (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Septic Tank* - a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Stormwater or Wastewater Collection System* - piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water runoff resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of stormwater and wastewater does not include treatment except where incidental to conveyance (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Submerged Fill Pipe* - any fill pipe the discharge opening of which is still entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid (Conn. Agencies Regs. 22a-174-1).
- *Substantial Modification* - the construction or installation of any addition to a facility or the restoration or renovation of a facility which causes one of the following to occur (Conn. Agencies Regs. 22a-449(d)-1(a)(2):
  1. increases or decreases the onsite storage of capacity of the facility
  2. significantly alters the physical configuration of the facility or impairs or improves the physical integrity of the facility or its monitoring systems
  3. modifies the facility so as to comply with the standards for new facilities specified in Conn. Agencies Regs. 22a-449(d)-1(e)(1)
  4. the construction or installation of any addition to an UST system or any restoration or renovation of an UST system which: increases or decreases the onsite storage capacity of the UST system; significantly alters the physical configuration of the UST system; or impairs or improves the physical integrity of the UST system or its monitoring system; or modifies the UST system so as to comply with the standards specified in subsection 22a-449(d)-102(a) of these regulations (Conn. Agencies Regs. 22a-449(d)-101(d)).

Substantial modification does not include a modification for the purpose of extending life expectancy in accordance with Conn. Agencies Regs. 22a-449(d) 1(h)(2)(D) of these regulations.
- *Surface Impoundment* - a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials) that is not an injection well (Conn. Agencies Regs. 22a-449(d)-101(d)).



- *Tank* -
  1. any vessel for containing liquids or gases (Conn. Agencies Regs. 22a-174-1)
  2. a stationary device designed to contain an accumulation of regulated substances and constructed of nonearthen materials including, but not limited to, concrete, steel, and plastic that provide structural support (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Temporarily Out-of-Service* - not in use, in that no regular filling drawing is occurring; or not established and maintained in accordance with Connecticut regulations; or not regularly attended and secured (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).
- *Throughput* - the number of gallons delivered through all equipment at a dispensing facility or a loading facility over a specified time interval (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Underground (When Referring to a Facility or Facility Component)* - that 10 percent or more of the volumetric capacity of the facility or component is below the surface of the ground and that portion which is below the surface of the ground is not fully visible for inspection (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).2)).
- *Underground Area* - an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Underground Release* - any belowground release (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Underground Storage Tank or UST* - any one or combination of tanks (including underground pipes connected thereto) that is used or designed to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:
  1. farm or residential tank of 1100 gallons or less capacity used for storing motor fuel for noncommercial purposes
  2. tank used for storing heating oil for consumptive use on the premises where stored
  3. septic tank
  4. pipeline facility (including gathering lines) regulated under:
    - A. the Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.)
    - B. the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.)
    - C. which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition
  5. surface impoundment, pit, pond, or lagoon
  6. storm-water or wastewater collection system
  7. flow-through process tank
  8. liquid trap or associated gathering lines directly related to oil or gas production and gathering operations
  9. storage tank situated in an underground area including, but not limited to, a basement, cellar, mineworking, drift, shaft, or tunnel if the storage tank is situated upon or above the surface of the floor.

The term underground storage tank or UST does not include any pipes connected to any tank which is described in paragraphs (a) through (i) of this definition (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Upgrade* - the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *UST System* - any underground storage tank (UST) system as that term is defined in Conn. Agencies Regs. 22a-449(d)-101 (Conn. Agencies Regs. 22a-449(d)-1(a)(2)).



- *UST System or Tank System* - an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any (Conn. Agencies Regs. 22a-449(d)-101(d)).
- *Vapor Balance System* - a combination of pipes or hoses which create a closed connection between the vapor spaces of an unloading tank and receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded and for which the vapor space connections on the unloading tank, the receiving tank and the pipes or hoses used are equipped with fittings which are vapor tight and which will automatically and immediately close upon disconnection so as to prevent the release of vapors. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Vapor Recovery System* - a device or system of devices with attendant valves, fittings, piping, and other appurtenances incorporating a means for the incineration of vapors or the liquefaction of vapors by absorption, adsorption, condensation or other means. The complete system as a whole and not just the individual components shall have been tested and approved by a nationally recognized testing laboratory (Conn. Agencies Regs. 22a-174-20(a)(1)).
- *Volatile Organic Compound or VOC* - any compound of carbon which participates in atmospheric photochemical reactions excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate and the organic compounds listed Appendix 10-1 which the USEPA Administrator has designated as having negligible photochemical reactivity (Conn. Agencies Regs. 22a-174-1(a)(1)).
- *Wastewater Treatment Tank* - a tank that is designed to treat an influent wastewater through physical, chemical, or biological methods (Conn. Agencies Regs. 22a-449(d)-101(d)).

**STORAGE TANK MANAGEMENT  
GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

	<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
Emissions/Discharges		
From POL Storage Vessels		
Connecticut's requirements for category ST.15 are closely linked with and nearly inseparable from the state's requirements for category ST.20. See category ST.20 for VOL emissions limitations, including gasoline emissions limitations.		
Emissions/Discharges From VOL Storage Vessels	ST.20.1.CT. through ST.20.15.CT.	10-12
Substandard USTs	ST.25.1.CT. through ST.25.3.CT.	10-19
UST State-Specific		
Petroleum and Hazardous Substance USTs: Life Expectancy	ST.30.1.CT. through ST.30.3.CT.	10-21
Nonresidential Oil and Petroleum Liquid USTs: Changes in Service or Closure of USTs	ST.30.4.CT. and ST.30.5.CT.	10-22
Nonresidential Oil and Petroleum Liquid USTs: Corrosion Protection	ST.30.6.CT. and ST.30.7.CT.	10-24
Nonresidential Oil and Petroleum Liquid USTs: Discharges	ST.30.8.CT.	10-24
Nonresidential Oil and Petroleum Liquid USTs: Documentation	ST.30.9.CT. through ST.30.11.CT.	10-25
Nonresidential Oil and Petroleum Liquid USTs: Facility Failure Determination	ST.30.12.CT. and ST.30.13.CT.	10-28
Nonresidential Oil and Petroleum Liquid USTs: Response	ST.30.14.CT.	10-29
Nonresidential Oil and Petroleum Liquid USTs: Life Expectancy	ST.30.15.CT. through ST.30.18.CT.	10-30
Nonresidential Oil and Petroleum Liquid USTs: New Facility Installation and Maintenance	ST.30.19.CT. and ST.30.20.CT.	10-32
Nonresidential Oil and Petroleum Liquid USTs: Relocation and Transfer	ST.30.21.CT. and ST.30.22.CT.	10-33
Nonresidential Oil and Petroleum Liquid USTs: Variances	ST.30.23.CT.	10-34
New or Upgraded USTs	ST.35.1.CT. and ST.35.2.CT.	10-35
UST Filling	ST.45.1.CT.	10-38
The Connecticut standards for UST filling are fundamentally equivalent to the Federal standards set forth in ST.45.1 and ST.45.2 of the U.S. TEAM Guide (Conn. Agencies Regs. 22a-449-101(a)(3) and 22a-449(d)-103(a)).		
UST Corrosion Protection	ST.50.1.CT.	10-39
Release Detection for USTs		
General	ST.60.1.CT.	10-40
Petroleum USTs	ST.65.1.CT.	10-41
Hazardous Substance USTs	ST.70.1.CT.	10-43

STORAGE TANK MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS		
	REFER TO CHECKLIST ITEMS:	REFER TO PAGE NUMBERS:
UST Releases	ST.80.1.CT.	10-45
UST Documentation	ST.90.1.CT.	10-47
Changes in Service or Closure of USTs	ST.95.1.CT. and ST.95.2.CT.	10-48

STORAGE TANK MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS		
	REFER TO CHECKLIST ITEMS:	REFER TO PAGE NUMBERS:
UST Releases	ST.80.1.CT.	10-45
UST Documentation	ST.90.1.CT.	10-47
Changes in Service or Closure of USTs	ST.95.1.CT. and ST.95.2.CT.	10-48

GUIDANCE FOR APPENDIX USERS		
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:	REFER TO PAGE NUMBERS:
10-1	Exempt VOCs	10-49

GUIDANCE FOR APPENDIX USERS		
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:	REFER TO PAGE NUMBERS:
10-1	Exempt VOCs	10-49

**COMPLIANCE CATEGORY:  
STORAGE TANK MANAGEMENT  
Connecticut Supplement**

**REGULATORY  
REQUIREMENTS:**

**REVIEWER CHECKS:  
October 1997**

**ST.20.  
EMISSIONS/  
DISCHARGES FROM  
VOL STORAGE VESSELS**

**ST.20.1.CT.** Stationary tanks and other containers with capacities greater than 40,000 gal (150,000 L) that store VOCs with a vapor pressure of 1.5 psia or greater must control VOC emissions (Conn. Agencies Regs. 22a-174-20(a)(2)).

Verify that stationary tanks and other containers with capacities greater than 40,000 gal (150,000 L) which store VOCs with a vapor pressure of 1.5 psia or greater either maintain working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or are designed and equipped with one of the following control devices:

- for VOCs with a vapor pressure of less than 11.0 psia (568 mm Hg), a fixed roof and a floating roof consisting of either a pontoon-type roof, double-deck type roof, or an internal floating cover which meets the following requirements:
  - rests on the surface of the liquid contents
  - is equipped with closure seals to close the space between the roof edge and the tank wall
- a vapor recovery system which collects all VOC vapors and gases discharged from the tank and a vapor return or disposal system which processes vapors so as to reduce their emission to the atmosphere by at least 95 percent by weight
- other equipment or means, approved by the Commissioner, with an efficiency equivalent to the standards for vapor recovery systems
- for VOCs with a vapor pressure of less than 11.0 psia (568 mm Hg), a floating roof consisting of either a pontoon-type roof, double-deck type roof, or external floating cover which meets the following:
  - rests on the surface of the liquid contents
  - is equipped with primary and secondary closure seals to close the space between the roof edge and the tank wall
  - meets the following requirement:
    - seals are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall
    - total area of gaps exceeding 0.125 in. in width between the secondary closure seal and the tank wall does not exceed 1.0 in.2/ft of tank diameter
    - secondary seal gaps are measured annually
    - visual inspections of secondary closures seals are conducted semiannually
- emergency roof drains are provided and have a slotted fabric cover which spans at least 90 percent of the area opening.

Verify that tank gauging and sampling devices are gas-tight, except when tank gauging or sampling occurs.

**COMPLIANCE CATEGORY:  
STORAGE TANK MANAGEMENT  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ST.20.2.CT.</b> Stationary tanks and other containers with capacities greater than 250 gal (950 L) that store VOCs with a vapor pressure of 1.5 psia or greater must control VOC emissions (Conn. Agencies Regs. 22a-174-20(a)(3) and (a)(4)).</p>	<p>Verify that stationary tanks and other containers with capacities greater than 250 gal (950 L) which store VOCs with a vapor pressure of 1.5 psia or greater meet one of the following requirements:</p> <ul style="list-style-type: none"> <li>- are equipped with a permanent submerged fill pipe with a discharge point 18 in. or less from the bottom of the storage vessel</li> <li>- are pressure tanks.</li> </ul> <p>(NOTE: These VOC emissions control requirements do not apply to the loading of VOCs into storage vessels with a capacity of less than 1000 gal that was installed before 1 June 1972. These VOC emissions control requirements do not apply to USTs installed before 1 June 1972 as long as the fill pipe between the fill connection and the storage vessel is an offset fill pipe.)</p>
<p><b>ST.20.3.CT.</b> Between 1 May and 15 September, gasoline storage tank farms must not deliver to dispensing facilities in Connecticut gasoline with a Reid vapor pressure in excess of 9.0 psi (Conn. Agencies Regs. 22a-174-20(a)(5)).</p>	<p>Verify that, between 1 May and 15 September, gasoline storage tank farms do not deliver to dispensing facilities in Connecticut gasoline with a Reid vapor pressure in excess of 9.0 psi.</p>
<p><b>ST.20.4.CT.</b> VOC emissions control devices must meet specific requirements (Conn. Agencies Regs. 22a-174-20(a)(8)).</p>	<p>(NOTE: The requirements for VOC emissions control devices apply to the following:</p> <ul style="list-style-type: none"> <li>- fixed roofs and floating roofs consisting of one of the following types: <ul style="list-style-type: none"> <li>- pontoon-type roof</li> <li>- double-deck type roof</li> <li>- internal floating cover</li> </ul> </li> <li>- floating roofs consisting of one of the following types <ul style="list-style-type: none"> <li>- pontoon-type roof</li> <li>- double-deck type roof</li> <li>- external floating cover.)</li> </ul> </li> </ul> <p>Verify that emissions control devices meet the following requirements:</p> <ul style="list-style-type: none"> <li>- there are no visible holes, tears, or other openings in the seal or any seal fabric or materials</li> <li>- all openings except stub drains are equipped with covers, lids, or seals so that:</li> </ul>

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<p><b>ST.20.5.CT.</b> The Department must be notified at least 30 days in advance of any testing of the gaps in the secondary seals of floating roof tanks (Conn. Agencies Regs. 22a-174-20(a)(9)).</p> <p><b>ST.20.6.CT.</b> Specific records must be maintained for tanks that have capacities greater than 40,000 gal, are equipped with external floating roofs, and contain VOCs with a vapor pressure greater than 1.0 psi and less than 1.5 psi (Conn. Agencies Regs. 22a-174-20(a)(10)).</p> <p><b>ST.20.7.CT.</b> Facilities loading VOCs with a vapor pressure of 1.5 psi or greater in quantities of 10,000 gal or more each day must employ VOC emissions control measures (Conn. Agencies Regs. 22a-174-20(b)(1) through</p>	<ul style="list-style-type: none"> <li>- the cover, lid or seal is in the closed position at all times except in actual use</li> <li>- automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports</li> <li>- rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting</li> <li>- routine inspections are conducted through roof hatches once per month</li> <li>- a complete inspection of cover and seal is conducted whenever the tank is emptied for nonoperational reasons, but in any event at least once per year</li> <li>- records of the average monthly storage temperature, true vapor pressure, monthly throughput and type of VOCs stored are maintained and kept for a minimum of 2 yr</li> <li>- records of the results of the inspections are maintained for at least 2 yr.</li> </ul> <p>Verify that the Department is notified at least 30 days in advance of any testing of the gaps in the secondary seals of floating roof tanks.</p> <p>Verify that the following records are maintained for VOC tanks which have capacities greater than 40,000 gal, are equipped with floating roofs, and contain VOCs with a vapor pressure greater than 1.0 psi and less than 1.5 psi:</p> <ul style="list-style-type: none"> <li>- average of the monthly storage temperature</li> <li>- type of liquid stored</li> <li>- vapor pressure of liquid stored.</li> </ul> <p>(NOTE: These requirements are based on a 30-day rolling average. Once a facility has exceeded the 30-day rolling average threshold, required VOC emissions control measures always apply, even if throughput later drops below the threshold.)</p> <p>Verify that facilities loading VOCs with a vapor pressure of 1.5 psi or greater in quantities of 10,000 gal or more each day meet the following requirements:</p> <ul style="list-style-type: none"> <li>- facilities are equipped with a vapor collection and disposal system,</li> </ul>

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(b)(3), (aa)(3), and (aa)(10)).	<p>operating in good working order</p> <ul style="list-style-type: none"> <li>- vapors discharged from delivery vehicles during loading are processed by vapor recovery systems</li> <li>- amount of VOCs emitted into the ambient air is less than 80 mg/L of liquid loaded over a 6-h period.</li> </ul> <p>Verify that facilities with a throughput of 10,000 gal or more each day, at which delivery vessels with capacities greater than 200 gal (760 L) are loading VOCs with a vapor pressure of 1.5 psi or greater, are equipped with a loading arm which has a vapor collection adaptor or pneumatic, hydraulic, or other mechanical means to force a vapor-tight seal between the adaptor and the hatch.</p> <p>Verify that facilities meet one of the following requirements:</p> <ul style="list-style-type: none"> <li>- utilize means to prevent liquid VOCs from draining from loading devices when they are removed from the hatch of any tank, truck, or trailer</li> <li>- accomplish drainage before loading devices are removed from the hatch of any tank, truck, or trailer.</li> </ul> <p>Verify that, when loading is conducted by means other than hatches, all loading and vapor lines are equipped with fittings which make vapor-tight connections and which close automatically when disconnected.</p> <p>Verify that facilities loading VOCs with a vapor pressure of 1.5 psi or greater in quantities of 10,000 gal or more each day maintain the following records for at least 2 yr:</p> <ul style="list-style-type: none"> <li>- daily throughput of all VOCs with a vapor pressure of 1.5 psi or greater</li> <li>- records of scheduled and unscheduled maintenance of vapor recovery systems.</li> </ul>
<p><b>ST.20.8.CT.</b> Gasoline transfers between delivery vehicles and loading facilities with a throughput of less than 10,000 gal/day and more than 4000 gal/day must utilize submerged fill pipes and vapor balance systems (Conn. Agencies Regs. 22a-174-20(b)(4), (aa)(4), and (aa)(10)).</p>	<p>Verify that gasoline transfers between delivery vehicles and loading facilities with a throughput of less than 10,000 gal/day and more than 4000 gal/day utilize submerged fill pipes and vapor balance systems.</p> <p>Verify that, for at least 2 yr, the following records are maintained for gasoline transfers between delivery vehicles and loading facilities with a throughput of less than 10,000 gal/day and more than 4000 gal/day:</p> <ul style="list-style-type: none"> <li>- daily throughput of all VOCs with a vapor pressure of 1.5 psi or greater</li> <li>- records of scheduled and unscheduled maintenance of vapor recovery systems.</li> </ul>
<p><b>ST.20.9.CT.</b> Dispensing</p>	<p>(NOTE: These requirements are based on a 30-day rolling average. Once a</p>

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<p>facilities meeting specific criteria must utilize approved control systems (Conn. Agencies Regs. 22a-174-20(b)(5), (aa)(5), and (aa)(10)).</p>	<p>facility has exceeded the 30-day rolling average threshold, required VOC emissions control measures always apply, even if throughput later drops below the threshold.)</p> <p>Verify that dispensing facilities meeting the following criteria utilize approved control systems at each stationary storage tank:</p> <ul style="list-style-type: none"> <li>- have gasoline storage tanks with capacities greater than 2000 gal</li> <li>- have a throughput of 10,000 gal or more per 30-day period.</li> </ul> <p>Verify that the following records are maintained for at least 2 yr:</p> <ul style="list-style-type: none"> <li>- daily throughput of all VOCs with a vapor pressure of 1.5 psi or greater</li> <li>- records of scheduled and unscheduled maintenance of vapor recovery systems.</li> </ul>
<p><b>ST.20.10.CT.</b> Stationary storage tanks for gasoline meeting specific criteria must utilize approved control systems (Conn. Agencies Regs. 22a-174-20(b)(6), (aa)(5), and (aa)(10)).</p>	<p>(NOTE: These requirements are based on a 30-day rolling average. Once a facility has exceeded the 30-day rolling average threshold, required VOC emissions control measures always apply, even if throughput later drops below the threshold.)</p> <p>Verify that gasoline stationary storage tanks which meet the following criteria utilize approved control systems:</p> <ul style="list-style-type: none"> <li>- were installed after 31 December 1982</li> <li>- have capacities of more than 250 gal</li> <li>- have a throughput of 10,000 gal or more per 30-day period.</li> </ul> <p>Verify that the following records are maintained for at least 2 yr:</p> <ul style="list-style-type: none"> <li>- daily throughput of all VOCs with a vapor pressure of 1.5 psi or greater</li> <li>- records of scheduled and unscheduled maintenance of vapor recovery systems.</li> </ul>
<p><b>ST.20.11.CT.</b> Gasoline transfers at dispensing facilities and stationary storage tanks must meet specific requirements for their approved control systems (Conn. Agencies Regs. 22a-174-20(b)(7) and (b)(8)).</p>	<p>Verify that gasoline is not dispensed to stationary storage tanks operating approved control systems in a manner that impairs the collection efficiency of the control systems.</p> <p>Verify that transfers are made through properly [not defined] maintained and operated approved control systems which are connected and operated in good working order.</p> <p>Verify that there are no leaks in the following during loading and unloading</p>



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**ST.20.12.CT.** Delivery vessels must meet specific requirements (Conn. Agencies Regs. 22a-174-20(b)(9)).

**ST.20.13.CT.** Tank trucks receiving gasoline from loading facilities and delivering gasoline at dispensing facilities must meet testing requirements (Conn. Agencies Regs. 22a-174-20(b)(11) and (b)(14)).

operations:

- pressure relief valves and hatch covers of tank trucks and trailers
- truck tanks
- storage tanks
- associated vapor and liquid lines.

Verify that delivery vehicles meet the following requirements:

- are designed and maintained to be vapor-tight at all times
- hatches are closed at all times during unloading and loading operations
- pressure relief valves are set to release at no less than 0.7 psi
- vapor laden delivery vehicles are refilled only at facilities in compliance with state requirements.

(NOTE: These requirements apply to the following:

- tank trucks receiving gasoline from loading facilities meeting the following criteria:
  - load VOCs with a vapor pressure of 1.5 psi or greater in quantities of 10,000 gal or more each day
  - facilities with a throughput of 10,000 gal or more each day, at which delivery vessels with capacities greater than 200 gal (760 L) are loading VOCs with a vapor pressure of 1.5 psi or greater
- tank trucks delivering gasoline to dispensing facilities meeting one of the following criteria:
  - the following:
    - have gasoline storage tanks with capacities greater than 2000 gal
    - have a throughput of 10,000 gal or more per 30-day period
  - the following:
    - were installed after 31 December 1982
    - have capacities of more than 250 gal
    - have a throughput of 10,000 gal or more per 30-day period.

Verify that tank trucks subject to requirements comply with the following standards:

- during the preceding period of 1 January to 30 June, tanks were tested in accordance with Method 27 of Appendix A in 40 CFR 60 or another manner approved by the Commissioner
- during the preceding 12 mo, tanks were tested in accordance with the requirements of Massachusetts, New Jersey, or New York
- during tests, tanks sustain pressure changes of no more than 3 in. of water in 5 min when pressurized to a gauge pressure of 18 in. of water or when evacuated to a gauge pressure of 6 in. of water

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<p><b>ST.20.14.CT.</b> Tank trucks that fail testing requirements must be repaired and retested within 15 days of the initial tests (Conn. Agencies Regs. 22a-174-20(b)(12)).</p> <p><b>ST.20.15.CT.</b> The Department must be contacted before and after tank truck tests occur (Conn. Agencies Regs. 22a-174-20(b)(13)).</p>	<ul style="list-style-type: none"> <li>- tank trucks display a marking near the U.S. Department of Transportation markings required by 49 CFR 177.824 showing the initials DEP and the date of the last test or comparable markings by the state in which the tank was tested.</li> </ul> <p>Verify that, during loading and unloading operations, tank trucks meet the following requirements:</p> <ul style="list-style-type: none"> <li>- tanks are not subject to pressures in excess of 18 in. of water nor a vacuum in excess of 6 in. of water</li> <li>- there are no visible liquid leaks nor any readings equal to or greater than the lower explosive limit (LEL, measured as propane) at 1 in. from any sources of potential leaks as detected by a combustible gas detector using the test procedure described in Appendix B to "Control of VOC Leaks from Gasoline Tank Trucks and Vapor Collection Systems" (USEPA-450/2-78-051).</li> </ul> <p>Verify that test records are maintained for at least 2 yr.</p> <p>Verify that tank trucks which fail testing requirements are repaired and retested within 15 days of the initial tests.</p> <p>Verify that, at least 48 h before tank truck tests are to occur, the Department is notified of the planned tests.</p> <p>Verify that, within 10 days after tank truck tests have occurred, the Department is given copies of the test reports.</p>

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<p><b>ST.25. SUBSTANDARD USTs</b></p> <p><b>ST.25.1.CT.</b> Petroleum UST systems for which construction or installation began before 1 November 1985 must meet upgrading, abandonment, and removal requirements (Conn. Agencies Regs., 22a-449(d)-110(a)).</p> <p><b>ST.25.2.CT.</b> Petroleum UST systems for which construction or installation began before 1 November 1985 and which have been modified to comply with new UST standards must not be operated beyond their life expectancy (Conn. Agencies Regs., 22a-449(d)-110(c)).</p> <p><b>ST.25.3.CT.</b> Hazardous substance UST systems for which construction or installation began before 22 December 1988 must meet upgrading, abandonment, and removal requirements (Conn. Agencies Regs., 22a-449(d)-110(b)).</p>	<p>(NOTE: These requirements do not apply to petroleum USTs modified to comply with new UST standards before the specified date of removal or abandonment for substandard USTs.)</p> <p>Verify that petroleum USTs for which construction or installation began prior to 1 November 1985 do not operate beyond the latest of the following dates:</p> <ul style="list-style-type: none"> <li>- 1 September 1989</li> <li>- 5 yr beyond the life expectancy.</li> </ul> <p>Verify that, in no event, do USTs for which construction or installation began prior to 1 November 1985 operate beyond 22 December 1998.</p> <p>Verify that unmodified USTs are removed or abandoned according to state requirements.</p> <p>Verify that petroleum USTs for which construction or installation began prior to 1 November 1985 and which have been modified to comply with new UST standards do not operate beyond their life expectancy.</p> <p>Verify that, before the last day of the life expectancy, USTs are removed or abandoned according to state requirements.</p> <p>(NOTE: These requirements do not apply to hazardous substance USTs modified to comply with new UST standards before the specified date of removal or abandonment for substandard USTs.)</p> <p>Verify that hazardous substance USTs for which construction or installation began prior to 1 November 1988 do not operate beyond the latest of the following dates</p> <ul style="list-style-type: none"> <li>- 28 July 1998</li> <li>- 5 yr beyond the life expectancy.</li> </ul>

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	<p>Verify that benzene USTs for which construction or installation began prior to 1 November 1988 do not operate beyond the latest of the following dates:</p> <ul style="list-style-type: none"><li>- 1 September 1989</li><li>- 5 yr beyond the life expectancy.</li></ul> <p>Verify that, in no event, do USTs for which construction or installation began prior to 22 December 1988 operate beyond 22 December 1998.</p> <p>Verify that hazardous substance USTs for which the date of construction or installation cannot be documented to the satisfaction of the Commissioner are not operated beyond 28 July 1998.</p>



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<p><b>ST.30.3.CT.</b> Installations/ CW facilities intending to transfer the ownership, pos- session, or control of new and existing USTs must disclose specific information (Conn. Agencies Regs. 22a-449(d)- 113).</p> <p><b>Nonresidential Oil and Petroleum Liquid USTs: Changes in Service or Closure of USTs</b></p>	<p>systems for which construction began before 28 July 1994.</p> <p>Verify that, at least 15 days prior to any transfers of UST ownership, possession, or control, installations/CW facilities disclose to the transferees the status of the UST with respect to compliance with state requirements.</p> <p>(NOTE: Disclosures include up-to-date copies of the information required to be submitted to the Commissioner.)</p> <p>(NOTE: According to Conn. Agencies Regs. 22a-449(d)-1(2)(a), a facility is a system of interconnected tanks, pipes, pumps, vaults, fixed containers, and appurtenant structures, singly or in any combination which are used or designed to be used for the storage, transmission or dispensing of oil or petroleum liquids, including any monitoring devices. As used in Conn. Agencies Regs. Section 22a-449(d)-1 of these regulations, the term facility refers only in to nonresidential underground facilities. Existing facilities are facilities the construction or installation of which began prior to 1 November 1985; new facilities are facilities the construction or installation of which began on or after 1 November 1985.)</p> <p>(NOTE: According to Conn. Agencies Regs. 22a-449(d)-1(a)(1)(B) and 22a-449(d)-101(a)(1), the requirements for nonresidential oil and petroleum liquid USTs apply to the following which are used for the storage, transmission, or dispensing of oil or petroleum liquids:</p> <ul style="list-style-type: none"> <li>- equipment or machinery containing regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks</li> <li>- any UST system with a capacity of 110 gal or less</li> <li>- any UST system containing a de minimis concentration of regulated substances</li> <li>- any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50, Appendix A</li> <li>- airport hydrant fuel distribution systems</li> <li>- UST systems with field-constructed tanks.)</li> </ul>
<p><b>ST.30.4.CT.</b> Installations/ CW facilities must submit to the Commissioner specific information concerning abandoned or temporarily</p>	<p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity</li> </ul>

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<p>out-of-service facilities (Conn. Agencies Regs. 22a-449(d)-1(c), (d)(4), and (d)(6)).</p>	<p>generation or irrigation pump or power</p> <ul style="list-style-type: none"> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that installations/CW facilities have submitted to the Commissioner the following information concerning abandoned or temporarily out-of-service facilities:</p> <ul style="list-style-type: none"> <li>- location</li> <li>- type and capacity</li> <li>- date of abandonment or removal from service.</li> </ul> <p>Verify that, within 30 days after they occur, any changes in the information required to be submitted to the state are reported to the Commissioner.</p>
<p><b>ST.30.5.CT.</b> Abandoned and temporarily out-of-service facilities must meet notification and use requirements (Conn. Agencies Regs. 22a-449(d)-1(k)).</p>	<p>Verify that, within 30 days after new or existing facilities are abandoned or rendered temporarily out of service, the Commissioner is given written notification of the change in service.</p> <p>Verify that facilities and facility components subject to abandonment procedures comply with the requirements of NFPA 30.</p> <p>Verify that abandoned facility are not operated.</p> <p>Verify that, before temporarily out-of-service facilities are returned to service, written notice of the intent to return to service is submitted to the Commissioner.</p>
<p><b>Nonresidential Oil and Petroleum Liquid USTs: Corrosion Protection</b></p> <p><b>ST.30.6.CT.</b> Cathodic protection monitoring devices and cathodic protection systems must comply with specifications of the manufacturer</p>	<p>Verify that cathodic protection monitoring devices and cathodic protection systems comply with the manufacturer's installation, maintenance, and operations specifications and recommendations.</p> <p>Verify that, if state requirements are inconsistent with manufacturer</p>

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(Conn. Agencies Regs. 22a-449(d)-1(e)(1)(D)).	specifications and recommendations, the most stringent of the two standards is met.
<b>ST.30.7.CT.</b> Cathodic protection systems must meet testing requirements (Conn. Agencies Regs. 22a-449(d)-1(e)(1)(E)).	<p>Verify that, within 30 days after the completion of the installation of cathodic protection monitoring devices and cathodic protection systems, the Commissioner is given a statement certifying that installation procedures were carried out in accordance with state requirements.</p> <p>Verify that cathodic protection systems protecting underground facility components are tested annually.</p> <p>Verify that a structure-to-soil test voltage reading of at least 0.85 V measured between the structure and a copper sulfate electrode is maintained</p> <p>(NOTE: Voltage drops other than those across the structure electrolyte boundary must be considered for valid interpretation of the voltage measurements.)</p> <p>Verify that impressed current cathodic protection systems are checked monthly to assure that system rectifiers providing sources of current are operating properly [not defined].</p> <p>Verify that monthly records of rectifier currents and voltage outputs are maintained.</p> <p>Verify that, if any cathodic protection system malfunctions or fails to meet structure-to-soil test voltage requirements, the system is repaired as quickly as possible within 30 days from the date of the discovery of the malfunction.</p> <p>Verify that anodes are utilized when all other corrective measures taken are insufficient to maintain the structure-to-soil test voltage of at least 0.85 V.</p> <p>Verify that other cathodic protection criteria are used only upon written approval of the Commissioner.</p>
<b>Nonresidential Oil and Petroleum Liquid USTs: Discharges</b>	<p><b>ST.30.8.CT.</b> New and existing facilities that discharge oil or petroleum liquids without a permit must take specific actions (Conn. Agencies Regs. 22a-449(d)-1(j)(3)).</p> <p>Verify that new and existing facilities that discharge oil or petroleum liquids without a permit to do so take the following actions:</p> <ul style="list-style-type: none"> <li>- immediately cease discharges</li> <li>- reclaim, recover, and properly [not defined] dispose of discharged liquids and other substances contaminated by them</li> <li>- restore the environment to conditions and qualities</li> </ul>



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<b>Nonresidential Oil and Petroleum Liquid USTs: Documentation</b>	<ul style="list-style-type: none"> <li>- repair damage caused by discharges.</li> </ul> <p>Verify that actions taken are completed to the satisfaction of the Commissioner.</p>
<b>ST.30.9.CT.</b> Installations/CW facilities must maintain activity records for new and existing facilities (Conn. Agencies Regs. 22a-449(d)-1(c), (g)(1), and (g)(3)).	<p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that installations/CW facilities maintain up-to-date records of the following activities:</p> <ul style="list-style-type: none"> <li>- significant construction or installation activities</li> <li>- monitoring</li> <li>- substantial modifications</li> <li>- abandonment, removal, or replacement of underground components or protective devices</li> <li>- other activities required by the Commissioner.</li> </ul> <p>Verify that activity records are signed within 7 days after completion of recorded activities to indicate that the records have been reviewed and attested to for accuracy.</p> <p>Verify that records are maintained onsite for at least 5 yr.</p>
<b>ST.30.10.CT.</b> Installations/CW facilities must maintain inventory records for new and	<p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> </ul>

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<p>existing facilities (Conn. Agencies Regs. 22a-449(d)-1(c), (g)(2)(A) through (g)(2)(D), and (g)(3)).</p>	<ul style="list-style-type: none"> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that installations/CW facilities record the following information according to the specified frequency:</p> <ul style="list-style-type: none"> <li>- on a daily basis, the following: <ul style="list-style-type: none"> <li>- the amount of product sold, used, and received</li> <li>- the level of water and product in the tank or container</li> </ul> </li> <li>- on a weekly basis, a reconciliation comparing these figures to determine whether an abnormal loss or gain has occurred.</li> </ul> <p>Verify that separate records are maintained for each system of interconnected tanks or containers as well as for each serving pump or dispenser.</p> <p>Verify that inventory records are signed within 7 days after their completion to indicate that the records have been reviewed and attested to for accuracy.</p> <p>Verify that daily measurements are made by gauge or gauge stick or by readout from a listed automatic monitoring device, calibrated in accordance with the manufacturer's specifications and recommendations.</p> <p>(NOTE: Daily inventory measurements need not be recorded on days when facilities are not in operation. Days on which product is delivered are considered days of operation.)</p> <p>Verify that, when facilities are not in operation for more than 15 consecutive days, inventory measurements are taken every 15th day.</p> <p>Verify that facilities have undergone failure determinations whenever required by the Commissioner.</p> <p>Verify that records are maintained onsite for at least 5 yr.</p> <p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p>

**ST.30.11,CT.** When inventory reconciliations indicate

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<p>abnormal loss or gain that cannot be explained by spillage, temperature variations, or other known causes, immediate investigative and corrective actions must be taken (Conn. Agencies Regs. 22a-449(d)-1(c), (g)(2)(E), (g)(2)(D), and (g)(3)).</p> <p><b>Nonresidential Oil and Petroleum Liquid USTs: Facility Failure Determination</b></p>	<ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that, when inventory reconciliations indicate abnormal loss or gain which cannot be explained by spillage, temperature variations, or other known causes, as many of the following actions as necessary are taken to confirm the loss or gain:</p> <ul style="list-style-type: none"> <li>- when an inventory record error is not apparent, a recalculation to determine abnormal loss or gain is made, starting from a point at which the records indicate no abnormal loss or gain</li> <li>- a detailed visual inspection of the components of the facility which are readily accessible for evidence of failure is performed</li> <li>- the dispensers of the particular oil or petroleum liquid in question is checked for proper calibration</li> <li>- a failure determination is performed on the piping system between the storage tank or container and dispensers in accordance with state requirements</li> <li>- a failure determination is performed on the tank or container in accordance with state requirements.</li> </ul> <p>Verify that, when abnormal losses or gains are confirmed, they are immediately reported to the state police.</p> <p>Verify that records are maintained onsite for at least 5 yr.</p>
<p><b>ST.30.12.CT.</b> Installations/CW facilities must notify the Commissioner and the local</p>	<p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> </ul>

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<p>fire marshal of the results of failure determinations (Conn. Agencies Regs. 22a-449(d)-1(c), (d)(5), and (d)(6)).</p>	<ul style="list-style-type: none"> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that, within 30 days of completion of failure determinations, installations/CW facilities notify the Commissioner and the local fire marshal of the results of failure determinations.</p> <p>Verify that, within 30 days after they occur, any changes in the information required to be submitted to the state are reported to the Commissioner and the local fire marshal.</p>
<p><b>ST.30.13.CT.</b> Installations/CW facilities must follow specific procedures in failure determinations for new and existing facilities (Conn. Agencies Regs. 22a-449(d)-1(c) and (i); 22a-449(d)-101(a)(4)).</p>	<p>(NOTE: Procedural requirements for failure determinations apply to UST systems storing fuel solely for the use by emergency power generators when the nominal capacities of the systems, excluding piping, are greater than 2100 gal.)</p> <p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>(NOTE: Failure determinations consist of any test that takes into consideration the temperature coefficient of expansion of the product being tested as related to any temperature change during the test, and is capable of detecting a loss of 0.50</p>

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<p><b>Nonresidential Oil and Petroleum Liquid USTs: Facility Failure Response</b></p> <p><b>ST.30.14.CT.</b> Specific actions must be taken in response to facility failures (Conn. Agencies Regs. 22a-449(d)-1(j)(1), (j)(2), and (j)(4)).</p>	<p>gal/h.)</p> <p>Verify that failure determinations are conducted according to NFPA 329.</p> <p>Verify that failure determination equipment is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions including routine maintenance and service checks for operability and running condition.</p> <p>Verify that failure determinations are conducted for new and existing facilities as follows:</p> <ul style="list-style-type: none"> <li>- on all fiberglass-reinforced plastic facility components, within 3 to 6 mo after their installation, and within 24 to 21 mo and within 12 to 9 mo prior to the end of their life expectancy</li> <li>- on all cathodically protected facility components, within 24 to 21 mo and within 12 to 9 mo prior to the end of their life expectancy</li> <li>- on existing facility components which have not been upgraded to meet design, construction, installation, and maintenance standards applicable to new facility components, within 36 to 33 mo prior to the end of their life expectancy and annually thereafter.</li> </ul> <p>Verify that alternative methods and schedules for failure determinations are employed only when the Commissioner has given approval for their use.</p> <p>Verify that the following actions are taken whenever new or existing facilities experience facility failure:</p> <ul style="list-style-type: none"> <li>- the state police are notified immediately</li> <li>- failed facility components are emptied and their use discontinued</li> <li>- one of the following actions is taken: <ul style="list-style-type: none"> <li>- failed facility components are removed or abandoned within 90 days in accordance with state requirements</li> <li>- failed facility components are repaired within 60 days</li> <li>- failed facility components are replaced according to state requirements.</li> </ul> </li> </ul> <p>Verify that, within 30 days after a facility failure, failed facility components are evaluated to determine whether conditions similar to those which caused the failure exist and that, within 10 days after the failure evaluation, the Commissioner is given results of the evaluation.</p>

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<p><b>Nonresidential Oil and Petroleum Liquid USTs: Life Expectancy</b></p> <p><b>ST.30.15.CT.</b> Life expectancy determinations must be conducted for new and existing facilities (Conn. Agencies Regs. 22a-449(d)-1(h)).</p> <p><b>ST.30.16.CT.</b> Existing facilities must not operate underground components for more than 5 yr beyond their life expectancy (Conn. Agencies Regs. 22a-449(d)-1(e)(2)).</p> <p><b>ST.30.17.CT.</b> New facilities must not operate underground components beyond their life</p>	<p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that life expectancy determinations have already been conducted for existing facilities.</p> <p>Verify that life expectancy determinations are conducted within 30 days after any substantial modification of existing facilities.</p> <p>Verify that life expectancy determinations are conducted within 30 days after the completion or substantial modification of new facilities.</p> <p>Verify that existing facilities do not operate underground components for longer than 5 yr after their life expectancy unless components are modified so as to meet standards for new facilities.</p> <p>Verify that, if existing facilities are not modified to meet standards for new facilities, existing facilities are removed or abandoned according to the procedures specified in NFPA 30 within 5 yr after the end of their life expectancy.</p> <p>Verify that new facilities do not operate underground components beyond their life expectancy.</p>

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<p>expectancy (Conn. Agencies Regs. 22a-449(d)-1(e)(4)).</p> <p><b>ST.30.18.CT.</b> Installations/CW facilities must notify the Commissioner and the local fire marshal of the results of the life expectancy determination of existing facilities (Conn. Agencies Regs. 22a-449(d)-1(c), (d)(1), (d)(3), and (d)(6)).</p> <p><b>Nonresidential Oil and Petroleum Liquid USTs: New Facility Installation and Maintenance</b></p> <p><b>ST.30.19.CT.</b> Installations/</p>	<p>Verify that, prior to the last day of their life expectancy, underground components are removed or abandoned according to the procedures specified in NFPA 30.</p> <p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that installations/CW facilities have notified the Commissioner and the local fire marshal of the results of the life expectancy determination.</p> <p>(NOTE: Notifications of life expectancy determinations include the following information:</p> <ul style="list-style-type: none"> <li>- facility location and capacity</li> <li>- date of installation</li> <li>- contents</li> <li>- type of facility</li> <li>- type of monitoring systems, if any</li> <li>- results of life expectancy determinations themselves</li> <li>- other information required by the Commissioner.)</li> </ul> <p>Verify that, within 30 days after they occur, any changes in the information required to be submitted to the state are reported to the Commissioner and the local fire marshal.</p> <p>(EXEMPTION: Facilities that meet all of the following criteria are exempt from</p>

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<p>CW facilities must notify the Commissioner and the local fire marshal within 30 days after the installation of a new facility (Conn. Agencies Regs. 22a-449(d)-1(c), (d)(2), (d)(3), and (d)(6)).</p>	<p>these requirements:</p> <ul style="list-style-type: none"> <li>- the nominal capacity exclusive of piping is less than 2100 gal</li> <li>- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as standby electricity generation or irrigation pump or power</li> <li>- the oil or petroleum liquid stored is not intended for resale</li> <li>- the facility is not used for the storage or handling of waste oil.</li> </ul> <p>Facilities that are used solely for the storage, transmission, or dispensing of viscous oil and petroleum liquids which do not flow at temperatures below 60 °F are exempt from these requirements. Liquids are deemed to flow if, when maintained for at least 48 h at a temperature of 60 °F and at a pressure of 14.7 psia, it assumes the shape of a container also maintained at a temperature of 60 °F for at least 48 h.)</p> <p>Verify that, within 30 days after the installation of a new facility, installations/CW facilities notify the Commissioner and the local fire marshal of the results of the life expectancy determination for new facilities.</p> <p>(NOTE: Notifications of life expectancy determinations include the following information:</p> <ul style="list-style-type: none"> <li>- facility location and capacity</li> <li>- date of installation</li> <li>- contents</li> <li>- type of facility</li> <li>- type of monitoring systems, if any</li> <li>- results of life expectancy determinations themselves</li> <li>- other information required by the Commissioner.)</li> </ul> <p>Verify that, within 30 days after they occur, any changes in the information required to be submitted to the state are reported to the Commissioner and the local fire marshal.</p> <p>Verify that new USTs meet one of the following requirements:</p> <ul style="list-style-type: none"> <li>- are listed fiberglass-reinforced plastic tanks, are equipped with contact plates under all fill and gauge openings, and are chemically compatible with the contained oil or petroleum liquid as determined by the manufacturer's warranty</li> <li>- are listed steel tanks externally coated with factory-applied corrosion-resistant coatings approved by the manufacturer for the proposed use, are equipped with cathodic protection and permanent cathodic protection monitoring devices, and are equipped with contact plates under all fill and gauge openings.</li> </ul>
<p><b>ST.30.20.CT.</b> New facilities and new components of substantially modified facilities must meet design, construction, installation, and maintenance standards (Conn. Agencies Regs. 22a-449(d)-1(e)(1)(A) through (e)(1)(C)).</p>	



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<p><b>Nonresidential Oil and Petroleum Liquid USTs: Relocation and Transfer</b></p>	<p>Verify that underground facility components meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are protected against corrosion by use of noncorrosive materials or steel components with factory-applied corrosion resistant coating and cathodic protection and permanent cathodic protection monitoring devices</li> <li>- are designed, constructed, and installed so as to allow failure determination of all underground piping without the need for substantial excavation</li> <li>- are chemically compatible with the contained oil or petroleum liquid as determined by the manufacturer's warranty.</li> </ul> <p>Verify that the installation and maintenance of underground components of new facilities and substantial modifications of underground components of new or existing facilities meet the following standards:</p> <ul style="list-style-type: none"> <li>- NFPA 30</li> <li>- manufacturer's specifications and recommendations.</li> </ul> <p>Verify that, if NFPA 30 provisions are inconsistent with manufacturer's specifications and recommendations, the most stringent of the two standards is met.</p> <p>Verify that, within 30 days of the completion of facility or component installations, the Commissioner is given a statement certifying that installation procedures were carried out in accordance with state requirements.</p>
<p><b>ST.30.21.CT.</b> Installations/CW must gain written approval from the Commissioner to move facility components from one location to another (Conn. Agencies Regs. 22a-449(d)-1(e)(3)).</p>	<p>Verify that, before facility components are moved from one location to another, installations/CW facilities gain written approval from the Commissioner.</p>
<p><b>ST.30.22.CT.</b> Installations/CW facilities intending to transfer the ownership, possession, or control of new and existing facilities must</p>	<p>Verify that, at least 15 days prior to any transfers of facility ownership, possession, or control, installations/CW facilities disclose to the transferees the status of the facility with respect to compliance with state requirements.</p> <p>(NOTE: Disclosures include up-to-date copies of the information required to be</p>

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disclose specific information (Conn. Agencies Regs. 22a-449(d)-1(f)).	submitted to the Commissioner.)
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ST.30.23.CT. Installations/CW facilities must comply with the terms and conditions of any variances issued by the Commissioner (Conn. Agencies Regs. 22a-449(d)-1(l)).	Verify that installations/CW facilities comply with the terms and conditions of variances issued by the Commissioner.

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<p><b>ST.35. NEW OR UPGRADED USTs</b></p> <p><b>ST.35.1.CT.</b> Installations/ CW facilities must comply with the Connecticut standards for new and substantially modified USTs that differ from the Federal standards for new or upgraded USTs (see citations in the right-hand column.)</p>	<p>(NOTE: Connecticut uses the term "substantially modified USTs" to refer to upgraded USTs.</p> <p><u>Spill and Overfill Equipment</u> (Conn. Agencies Regs. 22a-449-101(a)(3) and 22a-449(d)-102(a)(5)).</p> <p>The Connecticut spill and overfill prevention equipment standards for new and substantially modified USTs are fundamentally equivalent to the Federal standards for new and upgraded USTs set forth in ST.35.1 of the U.S. TEAM Guide.</p> <p>However, Connecticut standards omit the option to restrict flow 30 min prior to overfilling, to alert the operator with a high level alarm 1 min. before overfilling, and to shut off automatically flow into the tank, which Federal standards specify as a means of complying with spill and overfill prevention equipment requirements.</p> <p>Verify that the option omitted from Connecticut standards is not used as a means of complying with spill and overfill prevention equipment requirements.</p> <p><u>Structural Soundness</u> (Conn. Agencies Regs. 22a-449-101(a)(3) and 22a-449(d)-102(a)(1) through (a)(4)).</p> <p>The Connecticut standards for ensuring the structural soundness of UST systems installed after 22 December 1988 are fundamentally equivalent to the Federal requirements set forth in ST.35.3 of the U.S. TEAM Guide.</p> <p>However, the following are omitted from the Connecticut list of materials deemed acceptable for UST construction:</p> <ul style="list-style-type: none"> <li>- steel-fiberglass-reinforced-plastic composite</li> <li>- metal without additional corrosion protection.</li> </ul> <p>Also, metal without corrosion protection is omitted from the Connecticut list of materials deemed acceptable for UST piping construction.</p> <p>Verify that the following materials are not used as a means of complying with Connecticut standards for the structural soundness of USTs:</p> <ul style="list-style-type: none"> <li>- steel-fiberglass-reinforced-plastic composite</li> <li>- metal without additional corrosion protection.</li> </ul>

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<p><b>ST.35.2.CT.</b> USTs must meet notification requirements (Conn. Agencies Regs. 22a-449(d)-102(b)(2) through (b)(6) and (b)(10) through</p>	<p>Verify that metal without corrosion protection is not used as a means of complying with Connecticut standards for the structural soundness of UST piping construction.</p> <p><u>UST Installation</u> (Conn. Agencies Regs. 22a-449-101(a)(3) and 22a-449(d)-102(a)(6)).</p> <p>The Connecticut standards for the installation of USTs are fundamentally equivalent to the Federal standards set forth in ST.35.4 of the U.S. TEAM Guide.</p> <p>However, Connecticut standards include NFPA 30 requirements as one of the codes acceptable for use in UST installation activities. Connecticut also specifies a time frame within which certification must be submitted to the Commissioner.</p> <p>Additionally, Connecticut requires that, when acceptable codes differ, the most stringent codes are adhered to and that USTs are installed so as to allow for line and tank tightness testing without the need for substantial excavation.</p> <p>Verify that the most stringent of the following codes is adhered to during the installation of USTs:</p> <ul style="list-style-type: none"> <li>- nationally recognized codes alluded to in ST.35.4 of the U.S. TEAM Guide</li> <li>- NFPA 30.</li> </ul> <p>Verify that, within 30 days after installation of USTs, UST certification is completed and submitted to the Commissioner.</p> <p>Verify that USTs are installed to allow for line and tank tightness testing without the need for substantial excavation.</p> <p><u>Compatibility</u> (Conn. Agencies Regs. 22a-449-101(a)(3) and 22a-449(d)-103(d)).</p> <p>The Connecticut standards for UST materials compatibility are fundamentally equivalent to the Federal standards set forth in ST.35.5 of the U.S. TEAM Guide.</p> <p>Verify that the Commissioner and the local fire marshal have been notified of the life expectancy determination of petroleum UST systems the construction or installation of which began prior to 1 November 1985.</p> <p>Verify that the Commissioner and the local fire marshal have been notified of the</p>

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(b)(16)).	<p>life expectancy determination of hazardous UST systems the construction or installation of which began prior to 28 July 1994.</p> <p>Verify that, within 30 days after the completion of installation of petroleum UST systems (including, but not limited to, replacement UST systems and relocated UST systems) the construction or installation of which has begun on or after 1 November 1985, the Commissioner and the local fire marshal have notified of the life expectancy determination.</p> <p>Verify that, within 30 days after the completion of installation of hazardous substance UST systems (including, but not limited to, replacement UST systems and relocated UST systems) the construction or installation of which has begun on or after 28 July 1994, the Commissioner and the local fire marshal have been notified of the life expectancy determination.</p> <p>Verify that notifications to the Commissioner and the local fire marshal include the following:</p> <ul style="list-style-type: none"> <li>- UST system location and capacity</li> <li>- date of installation</li> <li>- contents</li> <li>- type of UST system</li> <li>- type of monitoring systems, if any</li> <li>- results of life expectancy determinations</li> <li>- other information as required by the Commissioner.</li> </ul> <p>Verify that, within 30 days after completing a tank tightness test or line tightness test, the Commissioner and the local fire marshal are notified of the test's results.</p> <p>Verify that, within 30 days after any notification information changes, changes are reported to the Commissioner and the local fire marshal.</p> <p>Verify that installations/CW facilities have certified that new UST systems comply with state requirements.</p> <p>Verify that installers of UST systems certify that they have conducted installation according to state requirements.</p>

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<p><b>ST.45. UST FILLING</b></p> <p><b>ST.45.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for UST filling that dif- fer from the Federal standards (Conn. Agencies Regs. 22a- 449(d)-101(a)(3), 22a-449(d)- 103(a), and 22a-449(d)- 105(d).</p>	<p>Except for the differences specified below, the Connecticut standards for UST filling are fundamentally equivalent to the Federal standards set forth in category ST.45 of the U.S. TEAM Guide.</p> <p>Verify that spills and overfills of petroleum that result in a release to the environment are reported immediately to the Commissioner.</p> <p>(NOTE: The Connecticut reportable quantity for spills or overfills of petroleum to the environment is not 25 gal as the Federal reportable quantity is. Rather, Connecticut requires that spills or overfills of petroleum to the environment be reported. Connecticut regulations do not mention 25 gal as a reportable quantity for petroleum.)</p> <p>Verify that spills or overfills of hazardous substances are cleaned up immediately.</p> <p>Verify that, if spills or overfills of hazardous substances cannot be cleaned up within 24 h or another time frame established by the Commissioner, the Commissioner is immediately notified.</p>

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<p><b>ST.50. UST CORROSION PROTECTION</b></p> <p><b>ST.50.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for UST corrosion pro- tection that differ from the Federal standards (Conn. Agencies Regs. 22a-449- 101(a)(3) and 22a-449(d)- 103(b) and (d)).</p>	<p>Except for the differences specified below, the Connecticut standards for UST corrosion protection are fundamentally equivalent to the Federal standards set forth in ST.50.1 and ST.50.2 of the U.S. TEAM Guide.</p> <p>Verify that all cathodic protection systems are tested within 6 mo after installation and at least every year thereafter.</p> <p>Verify that a structure-to-soil test voltage reading of at least -0.85 V measured between the structure and the copper-copper sulfate electrode is maintained.</p> <p>(NOTE: Other cathodic protection criteria may be used upon written approval from the Commissioner.)</p> <p>Verify that UST systems with impressed current cathodic protection are inspected every 30 days.</p> <p>Verify that, if any cathodic protection system malfunctions or fails to meet structure-to-soil test voltage requirements, the system is immediately repaired.</p> <p>Verify that anodes are replaced when all other corrective measures which have been taken are insufficient to maintain the structure to soil test voltage of at least -0.85.</p> <p>Verify that the most stringent of the following codes is adhered to during repairs of USTs:</p> <ul style="list-style-type: none"> <li>- industry standards and manufacturer's specifications alluded to in ST.50.2 of the U.S. TEAM Guide</li> <li>- NFPA 30.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>RELEASE DETECTION FOR USTs</b></p> <p><b>ST.60. General</b></p> <p><b>ST.60.1.CT.</b> Installations/ CW facilities must comply with the Connecticut general standards for UST release detection that differ from the Federal standards (Conn. Agencies Regs. 22a-449- 101(a)(3) and (a)(4); 22a- 449(d)-104(a) and (b)).</p>	<p>Except for the differences specified below, the Connecticut general standards for UST release detection are fundamentally equivalent to the Federal standards set forth in ST.60.1 of the U.S. TEAM Guide.</p> <p>Verify that USTs in existence prior to 28 July 1994 have undergone failure determinations until they are equipped with release detection equipment and meet other state requirements.</p> <p>Verify that failure determination results have been forwarded to the Commissioner.</p> <p>Verify that fiberglass-reinforced plastic USTs undergo tank tightness testing within 3 to 6 mo after installation of the UST system.</p> <p>Verify that, until release detection is installed, daily inventory records of USTs in existence prior to 28 July 1994 are maintained.</p> <p>Verify that inventory records include the confirmation and reporting of abnormal losses or gains.</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>RELEASE DETECTION FOR USTs</b></p> <p><b>ST.65. Petroleum USTs</b></p> <p><b>ST.65.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for petroleum UST release detection that differ from the Federal standards (Conn. Agencies Regs. 22a- 449-101(a)(3) and (a)(4); 22a-449(d)-104(c), (e), and (f)).</p>	<p>Except for the differences specified below, the Connecticut standards for petroleum UST release detection are fundamentally equivalent to the Federal standards set forth in ST.65.1 of the U.S. TEAM Guide.</p> <p>Verify that daily measurements for any water level in the bottoms of tanks are taken to the nearest 1/8 in. and recorded.</p> <p>(NOTE: Daily measurements for water levels in the bottoms of tanks, taken to the nearest 1/8 in., are not required for double-wall tanks with interstitial monitoring performed according to state requirements.)</p> <p>Verify that suction piping conveying regulated substances utilize one of the following means of complying with release detection standards:</p> <ul style="list-style-type: none"> <li>- having a line tightness test conducted at least every 3 yr until 36 to 33 mo prior to the end of the life expectancy, on which date and annually thereafter line tightness tests are conducted</li> <li>- use a monthly monitoring method conducted in accordance with state regulations.</li> </ul> <p>Verify that suction piping designed to meet the following criteria undergoes a line tightness test 33 to 36 mo prior to the end of the life expectancy and annually thereafter:</p> <ul style="list-style-type: none"> <li>- below-grade piping operates at less than atmospheric pressure</li> <li>- below-grade piping is sloped so that the contents of the pipe are drained back into the storage tank if the suction is released</li> <li>- only one check valve is included in each suction line</li> <li>- check valve is located directly below and as close as possible to the suction pump</li> <li>- methods which readily assess compliance status are employed.</li> </ul> <p>Verify that the following records are maintained for inventory control:</p> <ul style="list-style-type: none"> <li>- on a daily basis, the amount of regulated substances used and received as well as the level of water and product in the tank or container</li> <li>- on a weekly basis, a reconciliation comparing figures to determine whether abnormal losses or gains have occurred.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
	<p>Verify that separate records are maintained for each system of interconnected tanks or containers and serving pumps or dispensers.</p> <p>Verify that, no later than 7 days following their recording, records are reviewed and signed attesting to their accuracy.</p> <p>Verify that, when inventory reconciliation indicates an abnormal loss or gain not explainable by spillage or temperature, immediate investigations are begun and corrections are made.</p> <p>Verify that corrections are made by taking as many of the following steps as necessary:</p> <ul style="list-style-type: none"> <li>- when an inventory record error is not apparent, a recalculation to determine abnormal losses or gains is made from a point where records indicate no abnormal loss</li> <li>- detailed visual inspection of the components of the facility which are readily accessible for evidence of losses or gains</li> <li>- dispensers of the particular regulated substances in question are checked for proper calibration.</li> </ul> <p>Verify that as many of the following steps as necessary are taken when abnormal losses or gains, measured during a weekly reconciliation, in which there are four consecutive days of loss or four consecutive days of gain during the 10-day period prior to the reconciliation occur:</p> <ul style="list-style-type: none"> <li>- line tightness test is performed on the piping system between the storage tank or container and dispensers</li> <li>- tank tightness test is performed on all other piping attached to the tank</li> <li>- line tightness test is performed on all other piping attached to the tank.</li> </ul> <p>Verify that as many of the following steps as necessary are taken when abnormal losses or gains, measured during two consecutive weekly reconciliations, occur:</p> <ul style="list-style-type: none"> <li>- line tightness test is performed on the piping system between the storage tank or container and dispensers</li> <li>- tank tightness test is performed on all other piping attached to the tank</li> <li>- line tightness test is performed on all other piping attached to the tank.</li> </ul> <p>Verify that, when abnormal losses or gains are detected, the Commissioner is immediately notified of the abnormality.</p> <p>Verify that, to meet groundwater monitoring requirements, groundwater samples are taken on a monthly basis from each monitoring well and are checked by visual and vapor testing methods to determine the presence of a release.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>RELEASE DETECTION FOR USTs</b></p> <p><b>ST.70. Hazardous Substance USTs</b></p> <p><b>ST.70.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for hazardous substance UST release detection that differ from the Federal standards (Conn. Agencies Regs. 22a-449-101(a)(3) and (a)(4); 22a-449(d)-104(d), (e), and (f)).</p>	<p>Except for the differences specified below, the Connecticut standards for hazardous substance UST release detection are fundamentally equivalent to the Federal standards set forth in ST.70.1 and ST.70.2 of the U.S. TEAM Guide.</p> <p>Connecticut standards allow hazardous substance USTs to meet release detection requirements by complying with the requirements of 40 CFR 265.193, Containment and Detection of releases.</p> <p>Verify that the following records are maintained for inventory control:</p> <ul style="list-style-type: none"> <li>- on a daily basis, the amount of regulated substances used and received as well as the level of water and product in the tank or container</li> <li>- on a weekly basis, a reconciliation comparing figures to determine whether abnormal losses or gains have occurred.</li> </ul> <p>Verify that separate records are maintained for each system of interconnected tanks or containers and serving pumps or dispensers.</p> <p>Verify that, no later than 7 days following their recording, records are reviewed and signed, attesting to their accuracy.</p> <p>Verify that, when inventory reconciliation indicates an abnormal loss or gain not explainable by spillage or temperature, immediate investigations are begun and corrections are made.</p> <p>Verify that corrections are made by taking as many of the following steps as necessary:</p> <ul style="list-style-type: none"> <li>- when an inventory record error is not apparent, a recalculation to determine abnormal losses or gains is made from a point where records indicate no abnormal loss</li> <li>- detailed visual inspection of the components of the facility which are readily accessible for evidence of losses or gains</li> <li>- dispensers of the particular regulated substances in question are checked for proper calibration.</li> </ul> <p>Verify that as many of the following steps as necessary are taken when abnormal losses or gains, measured during a weekly reconciliation, in which there are four</p>

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	<p>consecutive days or loss or four consecutive days of gain during the 10-day period prior to the reconciliation occur:</p> <ul style="list-style-type: none"> <li>- line tightness test is performed on the piping system between the storage tank or container and dispensers</li> <li>- tank tightness test is performed on all other piping attached to the tank</li> <li>- line tightness test is performed on all other piping attached to the tank.</li> </ul> <p>Verify that as many of the following steps as necessary are taken when abnormal losses or gains, measured during two consecutive weekly reconciliations, occur:</p> <ul style="list-style-type: none"> <li>- line tightness test is performed on the piping system between the storage tank or container and dispensers</li> <li>- tank tightness test is performed on all other piping attached to the tank</li> <li>- line tightness test is performed on all other piping attached to the tank</li> </ul> <p>Verify that, when abnormal losses or gains are detected, the Commissioner is immediately notified of the abnormality.</p> <p>Verify that, to meet groundwater monitoring requirements, groundwater samples are taken on a monthly basis from each monitoring well and are checked by visual and vapor testing methods to determine the presence of a release.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ST.80. UST RELEASES</b></p> <p><b>ST.80.1.CT.</b> Installations/ CW facilities must comply with the Connecticut standards for UST releases that differ from the Federal standards (Conn. Agencies Regs. 22a-449(d)-101(a)(3), 22a-449(d)-105(a) through (c), and 22a-449(d)-106).</p>	<p>Except for the differences specified below, the Connecticut standards for UST releases are fundamentally equivalent to the Federal standards set forth in category ST.80 of the U.S. TEAM Guide.</p> <p>Verify that, within three working days after a release, a written report including the following information is submitted to the Commissioner:</p> <ul style="list-style-type: none"> <li>- estimated amount of product lost</li> <li>- location of release</li> <li>- identification of leaking components of the UST systems.</li> </ul> <p>Verify that UST systems do not discharge any water, substance, or material, including regulated substances, into the waters of the state without first being issued a permit to do so by the Commissioner.</p> <p>Verify that, when UST systems discharge regulated substances without a permit, discharges the following actions are taken:</p> <ul style="list-style-type: none"> <li>- immediately cease discharging liquid</li> <li>- discharged liquid and substances contaminated by it are reclaimed, recovered, and properly [not defined] disposed of</li> <li>- environment is restored to conditions and qualities acceptable to the Commissioner</li> <li>- damage caused by the discharge is repaired.</li> </ul> <p>Verify that UST systems at which failures occur immediately empty and discontinue the operation of failed components and meet one of the following requirements:</p> <ul style="list-style-type: none"> <li>- remove or abandon systems within 90 days</li> <li>- repair systems within 60 days</li> <li>- replace all damaged components.</li> </ul> <p>Verify that, when UST systems experience failure, all UST components are evaluated within 30 days to determine whether similar conditions to those which caused the failure still exist.</p> <p>Verify that, within 10 days after the evaluations, the Commissioner is notified in writing of the methods and results of the evaluations.</p> <p>Verify that sample analysis complies with the appropriate [not defined] chain-of-</p>

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	custody procedures to ensure sample integrity.  Verify that all samples are analyzed by a laboratory certified by the Connecticut Department of Health Service to perform that work.

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ST.90. UST DOCUMENTATION</b></p> <p><b>ST.90.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for UST documentation that differ from the Federal standards (Conn. Agencies Regs. 22a-449-101(a)(3), 22a-449(d)-103(e), 22a- 449(d)-104(g) 22a-449(d)- 107(e)).</p>	<p>Except for the differences specified below, the Connecticut standards for UST documentation are fundamentally equivalent to the Federal standards set forth in ST.90.1 and ST.90.2 of the U.S. TEAM Guide.</p> <p>Verify that installations/CW facilities maintain up-to-date records of the following:</p> <ul style="list-style-type: none"> <li>- significant construction or installation activities</li> <li>- monitoring</li> <li>- substantial modifications</li> <li>- abandonment, removal, or replacement of UST system components</li> <li>- other activities required by the Commissioner.</li> </ul> <p>Verify that, within 7 days after records are made, records are reviewed by the installation/CW facilities and signed to attest for accuracy.</p> <p>Verify that records are maintained onsite for at least 5 yr after the operational life of the UST system.</p> <p>(NOTE: Records older than 5 yr, or prior to 5 yr of age upon written approval by the Commissioner, may be maintained offsite as long as they are readily available.)</p> <p>Verify that the following release detection records are maintained for at least 5 yr beyond the operational life of UST systems:</p> <ul style="list-style-type: none"> <li>- all performance claims pertaining to any release detection system used and the manner in which claims have been justified or tested by the equipment manufacturer or installer</li> <li>- results of any sampling, testing, or monitoring</li> <li>- written documentation of all calibration, maintenance, and repair of release detection equipment permanently located onsite</li> <li>- schedules of required calibration and maintenance provided by the release detection equipment manufacturer.</li> </ul> <p>Verify that closure records are maintained for at least 5 yr beyond the completion of the UST system permanent closure.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ST.95. CHANGES IN SERVICE OR CLOSURE OF USTs</b></p> <p><b>ST.95.1.CT.</b> Installations/ CW facilities must comply with the Connecticut stan- dards for UST changes in service and closure that differ from the Federal standards (Conn. Agencies Regs. 22a- 449(d)-101(a)(3) and 22a- 449(d)-107).</p> <p><b>ST.95.2.CT.</b> Abandoned or temporarily out-of-service USTs must meet notification requirements (Conn. Agencies Regs. 22a-449(d)- 102(b)(7) through (b)(11)).</p>	<p>Except for the differences specified below, the Connecticut standards for UST changes in service and closure are fundamentally equivalent to the Federal standards set forth in category ST.95 of the U.S. TEAM Guide.</p> <p>Verify that closure records are maintained for at least 5 yr beyond the completion of the UST system permanent closure.</p> <p>Verify that abandoned UST systems are not used or operated.</p> <p>Verify that, within 30 days after any USTs are abandoned or taken out of service, installations/CW facilities have notified the Commissioner of the location, type, and capacity of abandoned and temporarily out-of-service USTs, as well as the date USTs were abandoned or removed from service.</p> <p>Verify that installations/CW facilities notify the Commissioner before any temporarily out-of-service USTs are returned to service.</p> <p>Verify that, within 30 days after completing a tank tightness test or line tightness test, the Commissioner and the local fire marshal are notified of the test's results.</p> <p>Verify that, within 30 days after any notification information changes, changes are reported to the Commissioner and the local fire marshal.</p>



## Appendix 10-1

### Exempt VOCs

(Source: Conn. Agencies Regs. 22a-174-1(97) Table 1(a)-1)

The following VOCs have been designated by the USEPA Administrator as having negligible photochemical reactivity:

1. methane
2. ethane
3. 1,1,1 trichloroethane
4. methylene-chloride (methyl chloroform)
5. dichloromethane
6. trichlorofluoromethane(CFC-11)
7. dichlorodifluoromethane (CFC-12)
8. chlorodifluoromethane (CFC-22)
9. trifluoromethane (CFC-23)
10. 1,1,1-trichloro 2,2,2-trifluoro-ethane (CFC-113)
11. 1,2-dichloro 1,1,2,2-tetrafluoro-ethane (CFC-114)
12. chloropentafluoroethane (CFC-115)
13. 1,1,1,2-tetrafluoroethane (HCFC-134a)
14. 1,1,-dichloro1-fluoroethane (HCFC-141-b)
15. 1-chloro 1,1-difluoroethane (HCFC-142b)
16. 1,1,2,2-tetrafluoroethane (HFC-134)
17. 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123)
18. 1,1,1-trifluoroethane (HFC-143a)
19. 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124)
20. 1,1-difluoroethane (HFC-152a)
21. Pentafluoroethane (HFC-125)
22. Perfluorocarbon compounds which fall into these classes:
  - a. cyclic, branched, or linear, completely fluorinated alkanes
  - b. cyclic, branched, or linear, completely fluorinated ethers with no unsaturations
  - c. cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations
  - d. sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

## SECTION 11

### TOXIC SUBSTANCES MANAGEMENT

Connecticut Supplement, October 1997

This section covers the state requirements for Toxic Substances Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Abatement* - the encapsulation, replacement, or removal of paint, plaster, soil, or other material containing toxic levels of lead which pose an unacceptable risk of exposure from interior and exterior surfaces in a manner such that children and adults are protected from present and future risk of lead poisoning (Title 19a Regulations of Connecticut State Agencies (Conn. Agencies Regs.), Part 111, Section 19a-111-1 (Conn. Agencies Regs. 19a-111-1)).
- *Accessible Surface* - any surface which is below 5 ft in height or is exposed in such a way that a child can come in contact with the surface (Conn. Agencies Regs. 19a-111-1).
- *Adaptive Reuse* - remodeling and conversion of an obsolete or unused building or other structure for alternate uses. For example, older industrial buildings, warehouses, offices, hotels, garages, etc., could be improved and converted for reuse in terms of industrial processes, residential use as apartments, or other purposes (Conn. Agencies Regs. 22a-69-1.1).
- *Adequately Wetted* - sufficiently mixed or coated with water, amended water, or an aqueous solution; or the use of a removal encapsulant to prevent dust emissions (Conn. Agencies Regs. 19a-332a-1).
- *Amended Water* - water to which a chemical wetting agent or removal encapsulant has been added to improve penetration (Conn. Agencies Regs. 19a-332a-1).
- *Asbestos* - actinolite, amosite, antnophyllite, chrysotile, crocidolite, tremolite, or any material which contains the above, all or part of which is in a friable state (Conn. Agencies Regs. 22a-209-1).
- *Asbestos Abatement* - the removal, encapsulation, enclosure, renovation, repair, demolition, or other disturbance of asbestos-containing materials except activities which are related to the removal or repair of asbestos cement pipe and are performed by employees of a water company as defined in Section 25-32a of the Connecticut General Statutes (Conn. Agencies Regs. 19a-332a-1).
- *Asbestos-Containing Material (ACM)* - material composed of asbestos of any type and in an amount greater than 1 percent by weight, either alone or mixed with other fibrous or nonfibrous material (Conn. Agencies Regs. 19a-332a-1).
- *Asbestos Contractor* - any person or entity engaged in asbestos abatement whose employees actually perform the asbestos abatement work (Conn. Agencies Regs. 19a-332a-1).
- *Chewable Surface* - any projection 1/2 in. or greater from an interior or exterior surface up to 5 ft in height that can be mouthed by a child. The chewable surface includes window sills, door frames, stair rails, and stairs, 2 in. back from the edge, and any other exterior and interior surface that may be readily chewed by children. Baseboards with an exposed horizontal edge may have quarter round molding applied to the top so that only

- vertical edges forming outside corners, if present, constitute a chewable surface (Conn. Agencies Regs. 19a-111-1).
- *Child* - a person under the age of 6 yr (Conn. Agencies Regs. 19a-111-1).
- *Commissioner* - the Commissioner of the Department of Public Health (Conn. Agencies Regs. 19a-111-1).
- *Construction* - any, and all, physical activity at a site necessary or incidental to the erection, placement, demolition, assembling, altering, blasting, cleaning, repairing, installing, or equipping of buildings or other structures, public or private highways, roads, premises, parks, utility lines, or other property, and shall include, but not be limited to, land clearing, grading, excavating, filling, and paving (Conn. Agencies Regs. 22a-26-1.1).
- *Defective Surface* - peeling, flaking, chalking, scaling, or chipping paint; paint over crumbling, cracking, or falling plaster, or plaster with holes in it; paint over a defective or deteriorating substrate; or paint that is damaged in any manner such that a child can get paint from the damaged area (Conn. Agencies Regs. 19a-111-1).
- *Department* - the state of Connecticut Department of Public Health (Conn. Agencies Regs. 19a-111-1).
- *Dwelling* - every building or shelter that is currently used or intended for human habitation, including exterior surfaces and all common areas thereof, and the exterior of every other structure located within the same lot that although may not be used for human habitation causes or is likely to affect noncompliance with the provisions of Conn. Agencies Regs. 19a-111-1 through 19a-111-11 (Conn. Agencies Regs. 19a-111-1).
- *Dwelling Unit* - a room or group of rooms arranged for use as a single household by one or more individuals living together who share living and sleeping facilities (Conn. Agencies Regs. 19a-111-1).
- *Elevated Blood Lead Level* - a blood lead concentration equal to or greater than 20 mg/dL or as defined by Connecticut General Statutes section 19a-111 (Conn. Agencies Regs. 19a-111-1).
- *Emergency* - any occurrence involving actual or imminent danger to persons or damage to property which demands immediate action (Conn. Agencies Regs. 22a-26-1.1).
- *Encapsulation* - resurfacing or covering surfaces, and sealing or caulking with durable materials, so as to prevent or control chalking, flaking substances containing toxic levels of lead from becoming part of house dust or accessible to children (Conn. Agencies Regs. 19a-111-1).
- *Enclosure* - the construction of an air-tight, impermeable, permanent barrier around asbestos-containing material to control the release of fibers into the air (Conn. Agencies Regs. 19a-332a-1).
- *Friable Asbestos-Containing Material* - any ACM that hand pressure can crumble, pulverize, or reduce to powder when dry and non-friable ACM that potentially can be broken, crumbled, pulverized or reduced to powder as a result of asbestos abatement (Conn. Agencies Regs. 19a-332a-1).
- *Lead Abatement Plan* - a written plan that identifies the location of intact and defective lead-based paint and ascribes how defective lead-based surfaces will be abated and how the environment, health, and safety will be protected. The plan also identifies the location of soil containing lead and describes sampling protocol used and abatement options (Conn. Agencies Regs. 19a-111-1).
- *Lead-Based* - paints, glazes, and other surface coverings, containing a toxic level of lead (Conn. Agencies Regs. 19a-111-1).
- *Nonfriable Asbestos-Containing Material* - any ACM that hand pressure can not crumble, pulverize, or reduce to powder when dry (Conn. Agencies Regs. 19a-332a-1).

- *Removal* - the taking out or stripping of any ACM from surfaces or structural components of a facility (Conn. Agencies Regs. 19a-332a-1).
- *Renovation* - altering, in any way other than demolition, one or more structural components. Operations in which load-supporting structural members are taken out are excluded (Conn. Agencies Regs. 19a-332a-1).
- *Repair* - the restoration of damaged ACM; including but not limited to the sealing, patching, enclosing, or encapsulating of damaged ACM to prevent fiber release (Conn. Agencies Regs. 19a-332a-1).
- *Spot Repair* - any asbestos abatement performed within a facility involving not more than 3 linear feet or 3 ft<sup>2</sup> of ACM (Conn. Agencies Regs. 19a-332a-1).
- *Toxic Level of Lead* - a level of lead which (Conn. Agencies Regs. 19a-111-1):
  1. when present in paint offered for sale for use on or in a residential dwelling contains more than 0.06 percent lead by weight as measured by atomic absorption spectrophotometry, graphite furnace absorption spectrophotometry, or inductively coupled plasma atomic emission spectrophotometry, by a laboratory approved by the Department for lead analysis
  2. when present in dried paint, plaster, or other accessible surface in a residential dwelling contains more than 0.50 percent lead by dry weight as measured by atomic absorption spectrophotometry (AAS), graphic furnace atomic absorption spectrophotometry (GFAAS), or inductively coupled plasma atomic emission spectrophotometry (ICP-AES) by a laboratory approved by the Department for lead analysis, or more than 1.0 mg lead/cm<sup>2</sup> of surface as measured onsite by an X-ray fluorescence analyzer or other equipment deemed sufficiently accurate and reliable by the Commissioner.
- *Visible Residue* - any debris or dust on surfaces in areas within the enclosed work area where asbestos abatement has taken place and which is visible to the unaided eye. All visible residue is assumed to contain asbestos (Conn. Agencies Regs. 19a-332a-1).
- *Work Area* - the specific area or location where the actual asbestos abatement work is being performed or such other areas of a facility which the Commissioner determines may be hazardous to public health as a result of such asbestos abatement (Conn. Agencies Regs. 19a-332a-1).

**TOXIC SUBSTANCES MANAGEMENT  
GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

	<b>REFER TO CHECKLIST ITEMS:</b>	<b>REFER TO PAGE NUMBERS:</b>
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
<b>PCB Management</b>		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.		
<b>Asbestos Management</b>		
Renovation and Demolition of Asbestos-Containing Structures	TT.2.5.1.CT. through TT.2.5.5.CT.	11-5
Asbestos Personnel Training/ Certification	TT.2.10.1.CT.	11-9
Asbestos Disposal	TT.2.15.1.CT.	11-10
<b>Radon Management</b>		
Refer to the U.S. TEAM Guide and the DOD Component Supplements for DOD and service-specific requirements.		
Lead-Based Paint Management	TT.4.1.1.CT and TT.4.1.2.CT.	11-11

<b>COMPLIANCE CATEGORY:</b> <b>TOXIC WASTE MANAGEMENT</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<b>ASBESTOS MANAGEMENT</b>  <b>TT.2.5.</b> <b>Renovation and Demolition of Asbestos-Containing Structures</b>  <b>TT.2.5.1.CT.</b> Installations/CW facilities must provide notification to the Commissioner regarding asbestos abatement work (Conn. Agencies Regs. 19a-332a-3).  <b>TT.2.5.2.CT.</b> Asbestos abatement projects must meet certain general requirements (Conn. Agencies Regs. 19a-332a-5).	<p>Verify that the installation/CW facility, or the asbestos abatement contractor, notifies the Commissioner before engaging in any asbestos abatement which involves more than 10 linear feet [<math>\sim 3</math> m] or more than 25 ft<sup>2</sup> [<math>\sim 2</math> m<sup>2</sup>] of ACM.</p> <p>Verify that the notification is postmarked or hand delivered at least 10 days before the start of the abatement.</p> <p>Verify that the notification includes the following information:</p> <ul style="list-style-type: none"> <li>- name, address, and telephone number of the asbestos contractor</li> <li>- name, address, and telephone number of the installation/CW facility</li> <li>- exact location of the work area</li> <li>- nature of the asbestos abatement</li> <li>- type of asbestos abatement activity</li> <li>- description of the work area including the size, age, and use of the work area</li> <li>- amount of ACM to be removed, enclosed, or encapsulated or contained</li> <li>- scheduled starting and completion dates</li> <li>- name and location of the authorized asbestos disposal facility where ACM will be deposited.</li> </ul> <p>Verify that signs are posted which meet the following requirements:</p> <ul style="list-style-type: none"> <li>- specifications in 29 CFR 1926.58(k)1(ii)</li> <li>- at all approaches to the work area</li> <li>- at sufficient distance from the work area to permit a person to read the sign and take precautionary measures to avoid exposure.</li> </ul> <p>Verify that heating, ventilating, and air-conditioning systems within the work area are shut down, locked out, and isolated to prevent contamination of and fiber dispersal to other areas of the installation/CW facility.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
	<p>Verify that all openings between the work area and nonwork areas, including, but not limited to, windows, doorways, elevator openings, corridor entrances, ventilation openings, drains, ducts, grills, grates, diffusers, and skylights, are sealed airtight with 6 mL polyethylene sheeting which is attached securely in place.</p> <p>Verify that all movable objects which can be removed from the work area are removed.</p> <p>Verify that contaminated items are cleaned if they are salvaged or reused, otherwise they are disposed of as asbestos waste.</p> <p>Verify that all nonmovable objects in the work area are covered with a minimum of 6 mL polyethylene sheeting secured in place.</p> <p>Verify that floor and wall surfaces in the work area are covered with polyethylene sheeting or equivalent in the following manner:</p> <ul style="list-style-type: none"> <li>- all seams and joints are sealed with tape or equivalent</li> <li>- floor covering consists of at least two layers of 6 mL polyethylene and covers at least the bottom 12 in. [~30.5 cm] of adjoining walls</li> <li>- wall coverings consist of a minimum of two layers of 4 mL polyethylene sheet and overlaps the floor covering to prevent leaks</li> <li>- there are no seams in the polyethylene sheet at the wall-to-floor joints.</li> </ul> <p>Verify that work area access is restricted to authorized personnel afforded proper respiratory protection and protective clothing.</p> <p>Verify that clean-up procedures involve high efficiency particulate air (HEPA) filtration and wet cleaning techniques.</p> <p>Verify that the sequence of wet cleaning and HEPA-filtered vacuuming is repeated until no visible residue is observed in the work area.</p> <p>Verify that negative pressure ventilation units with HEPA filtration are provided in sufficient number to allow at least one work place air change every 15 min.</p> <p>Verify that filtered air is exhausted to areas outside the building which are not near any intake for the building ventilation system.</p> <p>Verify that wastewater generated during abatement is filtered by best available technology prior to discharge.</p> <p>Verify that all asbestos-containing waste is adequately wetted with an amended water solution and placed in leak-tight containers which are labeled in accordance with 29 CFR 1926.58 and 40 CFR 61.152 as appropriate.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>TT.2.5.3.CT.</b> Asbestos abatement projects must meet specific asbestos removal requirements (Conn. Agencies Regs. 19a-332a-7).</p>	<p>Verify that all ACM to be removed or disturbed by removal is adequately wetted unless otherwise approved by the Commissioner.</p> <p>Verify that components are removed intact or in large sections whenever possible and carefully lowered to the floor.</p> <p>Verify that a coating of encapsulant, chosen so as to be compatible with subsequent coverings, is applied to all surfaces that have been stripped of ACM to securely seal any residual fibers.</p> <p>Verify that no equipment, supplies, or materials (except properly containerized waste material) are removed from an asbestos abatement project work area unless thoroughly decontaminated and cleaned free of asbestos debris.</p> <p>Verify that, if the equipment, supplies, or materials cannot be decontaminated, the object is either thoroughly wrapped in a minimum of two layers of 6 mL polyethylene sheeting with all joints, seams, and overlaps sealed with tape, or containerized in a metal drum with locking lid.</p> <p>Verify that HEPA-filtered vacuum cleaners are emptied of collected asbestos waste contents prior to removal of the equipment from the work area.</p> <p>Verify that all pre-filters in the air filtration devices are removed prior to the removal of the unit from the work site.</p> <p>Verify that the air filtration device is damp cleaned completely inside and out and the equipment is wrapped in polyethylene prior to removing it from the work area.</p>
<p><b>TT.2.5.4.CT.</b> ACM spot repairs must be performed in accordance with specific requirements ACM (Conn. Agencies Regs. 19a-332a-10).</p>	<p>Verify that air-tight barriers are constructed to assure asbestos fibers released during abatement activities are contained within the work area.</p> <p>Verify that all ACM is wet and placed in leak tight containers prior to being disturbed and kept wet until containerized.</p> <p>Verify that, until there is no more residue, either a HEPA-filtered vacuum cleaner or wet cleaning techniques are used to clean up the work area following abatement.</p> <p>Verify that asbestos-containing waste is properly containerized in appropriately labeled impermeable and leak tight containers labeled in accordance with 29 CFR 1926.58 and 40 CFR 61.152 prior to disposal and disposed of at an</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>TT.2.5.5.CT.</b> Installations/ CW facilities must retain asbestos abatement project records (Conn. Agencies Regs. 19a-332a-4(a)).</p>	<p>authorized asbestos disposal facility.</p> <p>(NOTE: If the authorized asbestos disposal site is located within Connecticut, written authorization for disposal must be obtained from the Department of Environmental Protection, Bureau of Waste Management.)</p> <p>Verify that wastewater generated is filtered by best available technology prior to discharge.</p> <p>Verify that the installation/CW facility receives records of all asbestos abatement projects from the asbestos contractor and retains them for 30 yr following completion of the project.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ASBESTOS MANAGEMENT</b></p> <p><b>TT.2.10. Asbestos Personnel Training/Certification</b></p> <p><b>TT.2.10.1.CT.</b> Asbestos services must be performed by a licensed person or contractor (Conn. Agencies Regs. 19a-332-18).</p>	<p>Verify that, if the installation/CW facility has asbestos abatement projects, asbestos services are performed by a licensed person or contractor.</p> <p>(NOTE: Asbestos contractor is defined as any person or entity engaged in asbestos whose employees actually perform the asbestos abatement work.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>ASBESTOS MANAGEMENT</b></p> <p><b>TT.2.15. Asbestos Disposal</b></p> <p><b>TT.2.15.1.CT.</b> Asbestos disposal must meet special handling requirements (Conn. Agencies Regs. 22a-209-8(i)).</p>	<p>Verify that asbestos is disposed of only at special waste disposal areas with written authorization from the Commissioner.</p> <p>Verify that the asbestos is packaged according to the following requirements:</p> <ul style="list-style-type: none"> <li>- in impermeable dust-tight containers such as heavy duty 6 mL plastic bags or sealed fiber pack drums</li> <li>- all containers are labeled in large legible letters as follows:</li> </ul> <p align="center"> <b>CONTAINS ASBESTOS AVOID OPENING OR BREAKING CONTAINER BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH.</b> </p> <p>Verify that asbestos is transported separately from other wastes.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<b>TT.4.1.</b> <b>LEAD-BASED PAINT MANAGEMENT</b>	
<b>TT.4.1.1.CT.</b> Defective lead-based surfaces in dwelling units where children reside must be abated (Conn. Agencies Regs. 19a-111-2).	<p>Verify that, when a child resides in a dwelling unit, all defective lead-based surfaces are abated.</p> <p>Verify that, when a child resides in a dwelling, all defective exterior surfaces and all defective surfaces in common areas containing toxic levels of lead are abated.</p> <p>Verify that, when a child has an elevated blood lead level, abatement includes all lead-based chewable surfaces whether or not that surface is defective and all lead-based movable parts of windows and surfaces that rub against movable parts of windows.</p> <p>Verify that, when a child resides in a dwelling requiring lead abatement, interior dust and exterior soil are assessed and, if found to be a source or a potential source of elevated blood lead, the soil is abated.</p> <p>Verify that a lead management plan is written within 60 days of receipt or inspection results.</p>
<b>TT.4.1.2.CT.</b> Lead abatement projects must be completed in a timely manner (Conn. Agencies Regs. 19a-111-5).	<p>Verify that lead abatement projects are completed in a timely manner according to the following time frames and schedule:</p> <ul style="list-style-type: none"> <li>- dwelling unit in which a child resides with an elevated blood lead level:             <ul style="list-style-type: none"> <li>- owner submits a written lead abatement plan to the local director of health with 15 working day of notification of inspection results</li> <li>- owner initiates abatement of toxic levels of lead within 45 working days of notification of inspection results and diligently pursues such abatement</li> </ul> </li> <li>- dwelling unit in which a child resides without an elevated blood lead level:             <ul style="list-style-type: none"> <li>- owner submits a written lead abatement plan to the local director of health within 20 working days of initial identification of a lead hazard</li> <li>- owner initiates abatement of all toxic levels of lead in a defective condition within 90 working days of initial identification of the inspection results and diligently pursues such abatement.</li> </ul> </li> </ul>



## SECTION 12

### WASTEWATER MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for Wastewater Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Alternative Onsite Sewage Treatment Systems* - a system serving one or more buildings on one property which utilizes a method of treatment other than a subsurface sewage disposal system and which involves a discharge to the waters of the state (Regulations of Connecticut State Agencies (Conn. Agencies Regs. 19-13-B104b(a))).
- *Bypass* - the diversion of wastes from any portion of the wastewater collection or treatment facilities (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Commission* - the Water Resources Commission of the State of Connecticut (Conn. Agencies Regs. 25-54cc-1(d)).
- *Composite Sample* - a sample collected over a specified period of time in order that the results are representative of the monitored activity over the same time period (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Continuous Discharge* - a discharge which occurs without interruption throughout the operating day, except for infrequent stoppages for maintenance, process changes, or other similar activities (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Director* - the Director of the Water Compliance Unit of the Department of Environmental Protection (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Domestic Sewage* - sewage that consists of water and human excretions or other waterborne waste incidental to the occupancy of the residential buildings or a nonresidential building but not including manufacturing process water, cooling water, wastewater from water softening equipment, commercial laundry wastewater, blowdown from heating or cooling equipment, water from cellars or floor drains, or surface water from roofs, paved surface, or yard drains (Conn. Agencies Regs. 19-13-B104b(b)).
- *Effluent Limitation* - either of the following:
  1. any numerical limitation imposed by the commissioner on quantities, discharge rates, or concentrations of any water, substance, or material discharged to the waters of the state
  2. any limitation imposed by the Commissioner on any other measure of the quality or quantity of the discharge (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Existing Discharge* - a discharge which existed within the year preceding 31 May 1988 or which was authorized by a valid state or NPDES permit on 31 May 1988 (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Furniture Refinishing Rinsewaters* - wastewaters generated by the rinsing of furniture after chemical stripping, cleaning, or refinishing but not including concentrated solutions from these processes (Conn. Agencies Regs. 22a-430-3(a)(3)).

- *Gray Water* - domestic sewage containing no fecal material or toilet wastes (Conn. Agencies Regs. 19-13-B103b(n)).
- *Land Treatment and Disposal* - a system which utilizes soil materials for the treatment of domestic sewage and disposes of the treated effluent by percolation into underlying soil and mixing with the groundwater (Conn. Agencies Regs. 19-13-B104b(d)).
- *Minor Photographic Processing Wastewaters* - wastewater generated by the processing of photographic film and having a maximum daily flow of no greater than 5000 gpd (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Minor Tumbling and Cleaning of Parts Wastewaters* - wastewaters generated by processing of only aluminum or unfinished steel parts for the removal of particulate metal or for cleaning, where no acids or cyanides are used in the processing, and having a maximum daily flow of no greater than 5000 gpd (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *New Discharge* - a discharge initiated after 31 May 1988 which is not an existing discharge, or an increase of an existing discharge beyond permit conditions after 31 May 1988 (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *New Source* - any building, structure, facility, or installation from which there is or may be a discharge:
  1. the construction of which commenced:
    - a. after the date the current limitation applicable to the type of source was adopted in Conn. Agencies Regs. 22a-430-4(1) of the Regulations of Connecticut State Agencies
    - b. after proposal of standards of performance in accordance with section 306 of the *Clean Water Act* which are applicable to the source, but only if the standards are promulgated in accordance with that same section within 120 days of their proposal
  2. if a new source performance standard is independently applicable to it which is constructed at a site at which no other discharge is located; or totally replaces the process or production equipment that causes the discharge at an existing facility; or whose processes are substantially independent of an existing facility at the same site, considering such factors as the extent to which the new process is integrated with the existing process and the extent to which the new facility is engaged in the same general type of activity as the existing facility (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Oil* - floating oil of any kind or in any form including, but not limited to, fuel oil, sludge, oil refuse, and oil mixed with other matter (Conn. Agencies Regs. 25-54cc-1(a)).
- *Person* - any individual, partnership, association, firm, corporation, or other entity, except a municipality, and includes the Federal government, the state, or any instrumentality of the state, and any officer or governing or managing body of any partnership, association, firm, or corporation (Conn. Agencies Regs. 19-13-B104b(f)).
- *Pollutant* - any water, substance, or material for which the permit in question specifies and effluent limitation (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Process Wastewater* - any wastewater which, during manufacturing, commercial, mining, or silvicultural activities, comes into direct contact with, or results from the production, use, or handling of any process, raw material, or intermediate or final product, byproduct, or waste product. This does not include cooling water (noncontact), domestic sewage, blowdown from heating and cooling equipment, stormwater, or wastewater from agricultural activities (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Publicly Owned Treatment Works (POTW)* - a system used for the collection, treatment, and/or disposal of sewage from more than one lot and which discharges to the waters of the state and which is owned by a municipality or the state (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Septage* - any water of material withdrawn from a septic tank used to treat domestic sewage (Conn. Agencies Regs. 19-13-B104b(g)).

- *Septic Tank* - a watertight receptacle which is used for the treatment of sewage and is designed and constructed so as to permit the settling of solids, the digestion of organic matter by detention, and the discharge of the liquid portion to a leaching system (Conn. Agencies Regs. 19-13-B103b(b)).
- *Sewage* - domestic sewage consisting of water and human excretions or other waterborne wastes incidental to the occupancy of a residential building or a nonresidential building, as may be detrimental to the public health or the environment, but not including manufacturing process water, cooling water, waste water from water softening equipment, blow down from heating or cooling equipment, water from cellar or floor drains, or surface water from roofs, paved surface, or yard drains (Conn. Agencies Regs. 19-13-B103b(a)).
- *Spill* - any discharge, spillage, seepage, leakage, infiltration, or any other method by which oil or chemical products could enter the waters of the state (Conn. Agencies Regs. 25-54cc-1(e)).
- *Substance* - one or more elements, compounds, or materials which, when added to water or wastewater, may alter the physical, chemical, biological, or other characteristic of the water or wastewater. The term includes heat, radiation, color, and conventional pollutants (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Subsurface Sewage Disposal System* - a system consisting of a house sewer; a septic tank followed by a leaching system, any necessary pumps and siphons, and any groundwater control system on which the operation of the leaching system is dependent (Conn. Agencies Regs. 19-13-B103b(c)).
- *Terminal* - any facility or area used for the loading or discharge of petroleum, chemical liquid, or products to or from vessels which are under direction of a single terminal operator (Conn. Agencies Regs. 25-54cc-1(b)).
- *Terminal Operator* - the specific person charged with the responsibility of operating a terminal (Conn. Agencies Regs. 25-54cc-1(c)).
- *Treatment Facility* - a system, or any part thereof, the purpose of which is to improve the chemical, physical, or biological quality of a waste or wastewater discharge, including pretreatment facilities discharging to a POTW (Conn. Agencies Regs. 22a-430-3(a)(3)).
- *Vessel* - any waterborne, motor-driven craft or barge used for commercial transportation (Conn. Agencies Regs. 25-54cc-1(f)).



WASTEWATER MANAGEMENT GUIDANCE FOR CONNECTICUT CHECKLIST USERS		
	REFER TO CHECKLIST ITEMS:	REFER TO PAGE NUMBERS:
(NOTE: The page numbers referenced in the electronic copy of this protocol may not be consistent with the page numbers in any printed copy.)		
Permits		
NPDES	WA.10.1.CT. and WA.10.2.CT.	12-5
Treatment Works	WA.20.1.CT. through WA.20.10.CT.	12-6
Discharges to a POTW/FOTW		
General	WA.25.1.CT. and WA.25.2.CT.	12-12
Other Discharges and Dischargers	WA.95.1.CT. and WA.95.2.CT.	12-14
Sewage Systems		
Septic Tanks	WA.100.1.CT.	12-16
Privies	WA.100.2.CT. and WA.100.3.CT.	12-17
Other: Onsite Sewage Disposal Systems	WA.100.4.CT. through WA.100.7.CT.	12-18

GUIDANCE FOR APPENDIX USERS		
REFER TO APPENDIX NUMBERS:	REFER TO APPENDIX TITLES:	REFER TO PAGE NUMBERS:
12-1	Effluent Limitations for Process Wastewater Discharges	12-21
12-2	Minimum Separation Distances	12-23

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>PERMITS</b></p> <p><b>WA.10. NPDES</b></p> <p><b>WA.10.1.CT.</b> Wastewater facilities with NPDES permits must meet specific monitoring requirements (Conn. Agencies Regs. 22a-430-3(f)(5)).</p> <p><b>WA.10.2.CT.</b> Wastewater facilities and POTWs with NPDES permits must meet specific reporting requirements (Conn. Agencies Regs. 22a-430-3(j)(10)).</p>	<p>Verify that wastewater facilities with NPDES permits monitor each outfall for each pollutant on an annual basis.</p> <p>Verify that wastewater facilities with NPDES permits which are required to submit a discharge toxicity evaluation to the Commissioner do so on a quarterly basis.</p> <p>Verify that, if any toxicity evaluation indicates a violation of an acute or chronic limitation, wastewater facilities submit repeat test results and another report within 30 days.</p> <p>Verify that all POTWs submit to the Commissioner the results of two acute toxicity tests performed on an undiluted daily composite sample of the discharge on a quarterly basis and that, if any test shows toxic impacts, a second test is performed and the results submitted to the Commissioner within 60 days of the first test.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.20. TREATMENT WORKS</b></p> <p><b>WA.20.1.CT.</b> Wastewater facilities must meet operation and maintenance requirements (Conn. Agencies Regs. 22a-430-3(f)(1), (g), (h), and (j)(8)).</p> <p><b>WA.20.2.CT.</b> Wastewater facilities must meet notification and approval requirements (Conn. Agencies Regs. 22a-430-3(i)(2), (3), and (j)(8)).</p>	<p>Verify that wastewater facilities properly operate and maintain all parts used for wastewater collection, storage, treatment, and control.</p> <p>(NOTE: Proper operation and maintenance includes, but is not limited to, effective performance, adequate funding, adequate operator staffing and training (including the employment of certified operators), and adequate laboratory and process controls.)</p> <p>Verify that wastewater facilities dispose of screenings, sludges, chemicals, oils, and any solid or liquid wastes resulting from treatment processes at locations approved by the Commissioner or by means of a licensed waste hauler.</p> <p>Verify that wastewater facilities take all reasonable steps to minimize or prevent any discharge in violation of the permit or any discharge which has a reasonable likelihood of adversely affecting human health or the environment.</p> <p>Verify that wastewater facilities install and maintain all required monitoring equipment according to manufacturer's recommendations and specification and that all such equipment is promptly repaired when it fails or malfunctions.</p> <p>Verify that wastewater facilities notify the Commissioner if any facility expansion, alteration, production increase, or process modification may result in the following:</p> <ul style="list-style-type: none"> <li>- the discharge of any new water, substance, or material</li> <li>- an increase the quantity or concentration of an existing pollutant beyond permit conditions</li> <li>- a new source.</li> </ul> <p>Verify that wastewater facilities obtain approval from the Commissioner prior to commencing any expansion or alteration of any wastewater collection facility, wastewater treatment facility, or method of operation.</p> <p>Verify that, when monitoring equipment fails or malfunctions, wastewater facilities notify the Director within 2 h, or at the start of the next business day if the failure/ malfunction occurred outside normal business hours, and that facilities submit a written report to the Director within 5 days of the failure/malfunction.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.20.3.CT.</b> Wastewater facilities must meet monitoring requirements (Conn. Agencies Regs. 22a-430-3(j)(1) through (3), (6), (7)).</p>	<p>Verify that wastewater facilities monitor discharges as specified by the Commissioner.</p> <p>Verify that wastewater facilities monitor for effluent limitations at the frequency specified by the Commissioner in a monitoring schedule.</p> <p>Verify that wastewater facilities conduct acute and chronic toxicity monitoring on a quarterly basis.</p> <p>Verify that, if wastewater facilities monitor any discharge more frequently than specified in the permit, the results are included in the calculation and reporting data in the monitoring report.</p> <p>Verify that monitoring samples and measurements are representative of the monitored activity and that all sampling is daily composite sampling, unless otherwise specified in the permit.</p> <p>Verify that effluent limitation monitoring (sample collection, preservation, handling, and analytical techniques) is done as specified in 40 CFR 136.</p>
<p><b>WA.20.4.CT.</b> Wastewater facilities must meet record-keeping and reporting requirements (Conn. Agencies Regs. 22a-430-3(j)(9) and (11)(E)).</p>	<p>Verify that monitoring records contain the following information:</p> <ul style="list-style-type: none"> <li>- mass or other measurement specified in the permit for each pollutant or substance</li> <li>- total flow for each discharge for each day of discharge and any other flow measurements specified in the permit for each discharge</li> <li>- date, exact place, and time of sampling/measurements</li> <li>- individuals who performed the sampling/measurements</li> <li>- dates analyses were performed</li> <li>- individuals who performed the analyses</li> <li>- analytical techniques or methods used</li> <li>- analysis results</li> <li>- frequency and duration for noncontinuous discharges</li> <li>- production information and where effluent limitations are production based</li> <li>- all calibration and maintenance records and original strip charge recordings for continuous monitoring, recording, or controlling instrumentation related to the wastewater treatment system.</li> </ul> <p>Verify that copies of all reports required by the permit and records of all data used to complete the permit application are maintained for at least 5 yr.</p> <p>Verify that the Commissioner is notified within 72 h of any erroneous or omitted</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.20.5.CT.</b> Wastewater facilities with schedules of compliance must meet notification requirements (Conn. Agencies Regs. 22a-430-3(j)(11)(C) and (D)).</p> <p><b>WA.20.6.CT.</b> Wastewater facilities must meet bypass restrictions (Conn. Agencies Regs. 22a-430-3(k)).</p>	<p>information and that corrected information is submitted within 30 days.</p> <p>Verify that wastewater facilities notify the Director within 72 h, and in writing within 30 days, when the concentration of any monitored substance or toxic substance exceeds, or will exceed, the highest of the following levels:</p> <ul style="list-style-type: none"> <li>- 100 micrograms/L</li> <li>- 200 micrograms/L for acrolein and acrylonitrile</li> <li>- 500 micrograms/L for 2,4-dinitrophenol and 2-methyl-4, 6-dinitrophenol</li> <li>- 1 mg/L for antimony</li> <li>- a level two times the level specified in the permit application.</li> </ul> <p>Verify that, if a schedule of compliance is included in a permit, wastewater facilities notify the Commissioner when compliance is achieved.</p> <p>Verify that the Director is notified within 2 h, or at the start of the next business day, of any noncompliance.</p> <p>Verify that wastewater facilities do not at any time bypass the collection system or treatment facilities, or any part thereof, unless:</p> <ul style="list-style-type: none"> <li>- the bypass is unanticipated, unavoidable, and necessary to prevent loss of life, personal injury, or severe property damage</li> <li>- there were no feasible alternatives to the bypass including, but not limited to, the use of auxiliary or back-up treatment facilities, retention of untreated wastes, stopping the discharges, or maintenance during normal periods of equipment downtime.</li> </ul> <p>Verify that wastewater facilities receive bypass approval from the Commissioner prior to conducting essential maintenance and that the bypass does not cause effluent limitations to be exceeded.</p> <p>Verify that, in the event of a bypass, wastewater facilities, to the extent possible, minimize or halt production and/or all discharges until the facility is restored or an alternative treatment method is provided.</p> <p>Verify that, in the event of a bypass, the Director is notified within 2 h and a written report is submitted within 5 days which contains the cause of the problem, duration (including dates and times), corrective action taken or planned to prevent other bypasses.</p> <p>Verify that, if, due to a bypass, any effluent limitation may be violated,</p>

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<p><b>WA.20.7.CT.</b> Wastewater facilities must meet resource conservation and spill prevention and control requirements (Conn. Agencies Regs. 22a-430-3(i)(1), (o), and (p)).</p>	<p>wastewater facilities immediately take steps to prevent or correct the violation.</p> <p>(NOTE: All facility expansions or alterations, production increases, or process modifications must meet the requirements specified herein.) Verify that wastewater facilities implement and maintain practices and/or facilities which result in the minimum amount of wastewater discharged.</p> <p>(NOTE: These results may be achieved by methods including, but not limited to, water conservation, resource recovery, waste recycling, wastewater reuse, and material or product substitution.)</p> <p>Verify that wastewater facilities do not use excessive amounts of water or add water to dilute an effluent in order to meet any permit limitations or conditions.</p> <p>Verify that wastewater facilities maintain practices, procedures, and facilities designed to prevent, minimize, and control spills, leaks, or other unplanned releases of all toxic or hazardous substances and any other substances as the Commissioner deems necessary to prevent pollution of the waters of the state.</p> <p>(NOTE: The spill prevention and control requirements apply to all facilities used for storing, handling, transferring, loading, or unloading such substances, including manufacturing areas. The requirements do not apply to facility components or systems already covered by plans prepared or approved under the <i>Resource Conservation and Recovery Act</i> and the Spill Prevention, Control, and Countermeasure program.)</p>
<p><b>WA.20.8.CT.</b> Wastewater facilities must meet instrumentation, alarm, flow recorder, and equalization requirements (Conn. Agencies Regs. 22a-430-3(q) and (r)).</p>	<p>Verify that, except for batch treatment systems (unless required by the Commissioner), process wastewater treatment systems include instrumentation to automatically and continuously indicate, record, and/or control those functions of the system and characteristics of the discharge which the Commissioner deems necessary to assure protection of the waters of the state.</p> <p>Verify that audible and visual alarms are included with all such required instrumentation and for other functions as the Commissioner determines are necessary to assure proper operation of the system.</p> <p>Verify that any condition which causes an alarm is corrected immediately, or that the discharge is stopped until the correction is made.</p> <p>Verify that all treatment facilities, except batch facilities and those discharging to the groundwaters (unless required by the Commissioner), include facilities or instrumentation to allow accurate measurement and recording of the volume of wastewater discharged per day and at any time (instantaneous).</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.20.9.CT.</b> Municipalities with POTWs must meet discharge and notification requirements (Conn. Agencies Regs. 22a-430-3(l)(1) and (2)).</p>	<p>Verify that all treatment facilities are designed to prevent upsets, malfunctions, or instances of noncompliance resulting from variations in wastewater strength or flow rate and include, as the Commissioner deems necessary, equalization facilities separate from the treatment facilities.</p> <p>Verify that municipalities with POTWs do not allow a new discharge to the POTW of any process wastewaters or any cooling waters without verification from the Commissioner that a permit has been issued.</p> <p>Verify that municipalities notify the Director of the following:</p> <ul style="list-style-type: none"> <li>- any known discharge of pollutants to their POTWs in excess of those quantities or concentrations permitted by the Commissioner</li> <li>- any known discharge of wastes to their POTWs in excess of those quantities or concentrations which existed prior to the issuance of the POTW permit</li> <li>- any known new discharges of any process wastewaters or any cooling waters which have been initiated without a permit from the Commissioner.</li> </ul> <p>Verify that this notification include information on the quality/quantity of effluent entering the POTW and any anticipated impact of the discharge on the quantity/quality of effluent to be discharged from the POTW.</p>
<p><b>WA.20.10.CT.</b> POTWs and installations/CW facilities discharging only domestic sewage to surface waters must meet secondary treatment requirements (Conn. Agencies Regs. 22a-430-4(r)).</p>	<p>Verify that POTWs and installations/CW facilities discharging only domestic sewage to surface waters meet the following biochemical oxygen demand (5 day) effluent limitations:</p> <ul style="list-style-type: none"> <li>- average concentration of all daily composite samples taken over any 30 consecutive day period does not exceed 30 mg/L</li> <li>- average concentration of all daily composite samples taken in any seven consecutive day period does not exceed 45 mg/L</li> <li>- maximum daily concentration does not exceed 50 mg/L</li> <li>- average effluent concentration does not exceed 15 percent of the average influent concentration for all daily composite samples taken in any 30 consecutive day period.</li> </ul> <p>Verify that POTWs and installations/CW facilities discharging only domestic sewage to surface waters meet the following suspended solids effluent limitations:</p> <ul style="list-style-type: none"> <li>- average concentration of all daily composite samples taken over any 30 consecutive day period does not exceed 30 mg/L</li> <li>- average concentration of all daily composite samples taken in any seven consecutive day period does not exceed 45 mg/L</li> </ul>

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- average effluent concentration does not exceed 15 percent of the average influent concentration for all daily composite samples taken in any 30 consecutive day period.

Verify that POTWs and installations/CW facilities discharging only domestic sewage to surface waters maintain pH within the limits of 6.0 to 9.0, unless it is demonstrated as part of a permit application that:

- inorganic chemicals are not added to the waste stream as part of the treatment process
- contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0.



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<p><b>DISCHARGES TO A POTW/FOTW</b></p> <p><b>WA.25. General</b></p> <p><b>WA.25.1.CT.</b> Dischargers to a POTW must meet specific notification requirements (Conn. Agencies Regs. 22a-430-3(j)(11)(D) and (F)).</p> <p><b>WA.25.2.CT.</b> Dischargers to POTWs must meet specific discharge prohibitions (Conn. Agencies Regs. 22a-430-4(t)).</p>	<p>Verify that the Director is notified within 2 h, or at the start of the next business day, and in writing within 5 days of any actual or anticipated permit noncompliance if:</p> <ul style="list-style-type: none"> <li>- the noncompliance is greater than two times the permitted level (except for violations of any maximum daily limitation in an NPDES permit, in which case all violations are to be reported)</li> <li>- the condition may endanger human health, the environment, or the operation of a POTW, including sludge handling and disposal.</li> </ul> <p>Verify that the written report contains the following information:</p> <ul style="list-style-type: none"> <li>- exact dates and times</li> <li>- if the noncompliance has not been corrected, the anticipated time it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.</li> </ul> <p>Verify that within 90 days after the adoption of a limitation for a discharge to a POTW a report is submitted to the Director which contains the following information:</p> <ul style="list-style-type: none"> <li>- the nature and concentration of all substances in the discharge for which new limitations have been adopted</li> <li>- an indication of whether the new limitations are being met on a consistent basis and, if not, the additional facilities or procedures needed to meet them.</li> </ul> <p>Verify that no discharge to a POTW causes or threatens, either singly or in combination with other discharges, any of the following:</p> <ul style="list-style-type: none"> <li>- interference with or adverse effect upon the operation of the POTW</li> <li>- interference with or adverse effect upon the POTW's sludge handling, use, or disposal</li> <li>- the POTW to exceed its influent design loading parameters</li> <li>- the POTW to violate its permit</li> <li>- a worsening of any condition which is causing the POTW to exceed its influent design loading parameters</li> <li>- pass through any substance into the receiving waters which then causes or</li> </ul>

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threatens pollution.

Verify that no discharge to a POTW contains any of the following:

- any substance which causes or threatens a fire or explosion hazard in the POTW
- any substance which causes or threatens corrosive structural damage to the POTW
- a substance with a pH less than 5.0, unless the POTW is specifically designed to accommodate such a discharge
- solid or viscous wastes in amounts which cause or threaten obstruction to flow in the sewers
- heat in amounts which cause the temperature of the POTW influent to exceed 104 °F, unless the POTW is designed to accommodate such heat.

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.95. OTHER DISCHARGES AND DISCHARGERS</b></p> <p><b>WA.95.1.CT.</b> Terminals for the loading or discharge of petroleum, chemical liquids, or products from vessels must meet Commission notification and public safety requirements (Conn. Agencies Regs. 25-54cc-2 through 7).</p> <p><b>WA.95.2.CT.</b> Process wastewater discharges must meet specific treatment requirements (Conn. Agencies Regs. 22a-430-4(s)).</p>	<p>Verify that licensed terminals file with the Commission a current listing of the following information:</p> <ul style="list-style-type: none"> <li>- the terminal operator's name, address, and home and business phone numbers</li> <li>- the same information for the alternate terminal operator.</li> </ul> <p>Verify that licensed terminals are designed, planned, constructed, and maintained so as to protect the public safety and prevent discharge or spillage into the waters of the state.</p> <p>Verify that licensed terminals submit a drawing or current drawing revision of its existing facilities to the Commission immediately after 1 July of each year.</p> <p>Verify that licensed terminals file with the Commission a copy of its current operating rules, including the procedures for cargo transfers to or from vessels.</p> <p>Verify that licensed terminals file with the Commission a plan of action to contain and remove any oils from spills and that the terminals maintain, or have available at the location, suitable [undefined] equipment to promptly contain and remove any leakage or spillage from the waters of the state.</p> <p>Verify that licensed terminals file with the Commission a statement on the method of handling and disposal of all miscellaneous waste oils, such as drippings, cleanings from oil separators, and recoveries from spills.</p> <p>(NOTE: WA.95.2.CT applies to metal finishing discharges, nonferrous metals manufacturing discharges, iron and steel manufacturing discharges, electrical and electronic components discharges, aluminum forming discharges, battery manufacturing discharges, coil coating discharges, copper forming discharges, and metal molding and castings discharges.)</p> <p>Verify that, if any of the following substances are present in a discharge at concentrations higher than the limitations allowed in Appendix 12-1 prior to mixing with other categories of discharge, the specified treatment technology requirement is met:</p> <ul style="list-style-type: none"> <li>- for cyanide, complete destruction beyond the cyanate form prior to mixing with noncyanide wastewaters (if by alkaline chlorination, two-stage</li> </ul>

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	<p>destruction is required)</p> <ul style="list-style-type: none"> <li>- for hexavalent chromium, complete reduction to the trivalent form prior to mixing with nonhexavalent chromium bearing wastewaters</li> <li>- for metals, pretreatment for chelating agents, neutralization, flocculation/coagulation, and clarification and/or filtration with sludge dewatering and/or removal as necessary.</li> </ul> <p>Verify that the following specified treatment technology requirements are met for the corresponding categories of discharge:</p> <ul style="list-style-type: none"> <li>- for minor photographic processing wastewaters, silver recovery</li> <li>- vehicle service drains and vehicle washing facilities, gravity separation and skimming in a tank with a capacity of 1000 gal or a retention time of at least 24 h at the average daily flow, whichever is greater</li> <li>- for minor tumbling and cleaning of parts wastewaters, gravity separation in a tank with a retention time of at least 24 h at average daily flow</li> <li>- for furniture refinishing rinsewaters, neutralization, if acids are used in the process, and solids removal by gravity separation or filtration</li> <li>- for transfer station floor drains, gravity separation and skimming of floatable materials</li> <li>- for incinerator scrubber wastewaters, neutralization to a pH of between 6.0 and 10.0, and gravity settling</li> <li>- for carpet and upholstery cleaners, removal of lint through filtration.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b> <b>October 1997</b>
<b>SEWAGE SYSTEMS</b>  <b>WA.100.</b> <b>Septic Tanks</b>  <b>WA.100.1.CT.</b> Septic tanks must meet general waste disposal requirements (Conn. Agencies Regs. 19-13-B103c(c) through (e) and B104c(b) through (d)).	<p>Verify that the contents of septic tanks are only disposed of in the following manner:</p> <ul style="list-style-type: none"> <li>- if the contents are to be disposed of on the land of the owner, by burial or other method which does not present a health hazard or nuisance</li> <li>- if the contents are to be disposed of on land other than that of the owner, the contents are transferred and removed by a licensed cleaner and disposed of as specified in a permit from the local Director of Health</li> <li>- if the contents are to be dispersed on a public water supply watershed, only as specified in a permit from the Commissioner of Health Services.</li> </ul> <p>Verify that septic tanks meet the following waste transportation requirements:</p> <ul style="list-style-type: none"> <li>- all material removed from any septic tank is transported in watertight vehicles or containers in such a manner [undefined] that no nuisance or public health hazard is presented</li> <li>- all vehicles used for the transportation of this material bear the name of the company or licensee and have a clean exterior condition at all times</li> <li>- no defective or leaking equipment is used in cleaning operations</li> <li>- all vehicles and equipment are stored in a clean condition when not in use</li> <li>- water used for rinsing vehicles or equipment is considered sewage and is disposed of in a sanitary manner approved by the local Director of Health.</li> </ul> <p>Verify that septic tanks are cleaned by first lowering the liquid level sufficiently below the outlet to prevent sludge or scum from overflowing to the leaching system where it could cause clogging and otherwise damage the system.</p> <p>Verify that substantially all of the sludge and scum accumulation is removed whenever possible and that the inlet and outlet baffles are inspected for damage or clogging.</p> <p>Verify that septic tank cleaners use all reasonable precaution to prevent damaging the sewage disposal system with their vehicle or equipment.</p> <p>Verify that accidental spillage of sewage, sludge, or scum is promptly removed or otherwise abated so as to prevent a nuisance or public health hazard.</p>

**Privies**

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>WA.100.2.CT.</b> Privies must meet general waste disposal requirements (Conn. Agencies Regs. 19-13-B103c(b) through (d) and B104c(b) and (c)).</p>	<p>Verify that privies are kept in a sanitary condition at all times and are constructed and maintained in a manner which prevents the escape of odors and which excludes animals and insects.</p> <p>Verify that the contents of privy vaults are only disposed of in the following manner:</p> <ul style="list-style-type: none"> <li>- if the contents are to be disposed of on the land of the owner, by burial or other method which does not present a health hazard or nuisance</li> <li>- if the contents are to be disposed of on the land other than that of the owner, the contents are transferred and removed by a licensed cleaner and disposed of as specified in a permit from the local Director of Health</li> <li>- if the contents are to be dispersed on a public water supply watershed, only as specified in a permit from the Commissioner of Health Services.</li> </ul> <p>Verify that privies meet the following waste transportation requirements:</p> <ul style="list-style-type: none"> <li>- all material removed from any privy is transported in watertight vehicles or containers in such a manner [undefined] that no nuisance or public health hazard is presented</li> <li>- all vehicles used for the transportation of this material bear the name of the company or licensee and have a clean exterior condition at all times</li> <li>- no defective or leaking equipment is used in cleaning operations</li> <li>- all vehicles or equipment are stored in a clean condition when not in use</li> <li>- water used for rinsing vehicles or equipment is considered sewage and is disposed of in a sanitary manner approved by the local Director of Health.</li> </ul>
<p><b>WA.100.3.CT.</b> Nondischarging sewage disposal systems must meet design, installation, operation, approval, and waste disposal requirements (Conn. Agencies Regs. 10-13-B103f(a), (b)(2), (d), and (e)(2)).</p>	<p>Verify that nondischarging sewage disposal systems are designed, installed, and operated as specified in the <i>Technical Standards for Subsurface Sewage Disposal Systems</i>, published by the Commissioner of Health Services.</p> <p>Verify that wastes removed from composting toilets and dry privy vaults are disposed of by burial or other methods approved by the local Director of Health</p> <p>Verify that chemical flush toilets or chemical privies located inside human habitations are approved by the Commissioner of Health Services and the local Director of Health.</p> <p>Verify that liquid waste from chemical flush toilets or chemical privies is disposed of in a location and manner approved by the local Director of Health and that this waste is not disposed of on a public water supply watershed or within 500 ft of any water supply well unless approved by the Commissioner of Health Services.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>Other Onsite Sewage Disposal Systems</b></p> <p><b>WA.100.4.CT.</b> Onsite household and small commercial subsurface sewage disposal systems with a capacity of 5000 gpd or less and nondischarging toilet systems must meet general waste disposal requirements (Conn. Agencies Regs. 19-13-B103c(a) through (d) and (f)).</p> <p><b>WA.100.5.CT.</b> Onsite household and small commercial subsurface sewage disposal systems with a capacity of 5000 gpd or less and nondischarging toilet</p>	<p>Verify that all sewage is disposed of by connection to public sewers, by subsurface sewage disposal systems, or by other methods approved by the Commissioner of Health Services.</p> <p>Verify that the contents of subsurface sewage disposal systems are only disposed of in the following manner:</p> <ul style="list-style-type: none"> <li>- if the contents are to be disposed of on the land of the owner, by burial or other method which does not present a health hazard or nuisance</li> <li>- if the contents are to be disposed of on the land other than that of the owner, the contents are transferred and removed by a licensed cleaner and disposed of as specified in a permit from the local Director of Health</li> <li>- if the contents are to be dispersed on a public water supply watershed, only as specified in a permit from the Commissioner of Health Services.</li> </ul> <p>Verify that onsite household and small commercial subsurface sewage disposal systems with a capacity of 5000 gpd or less and nondischarging toilet systems meet the following waste transportation requirements:</p> <ul style="list-style-type: none"> <li>- all material removed from any sewer, subsurface sewage disposal system, sewage holding tank, toilet, or sewage plumbing system is transported in watertight vehicles or containers in such a manner [undefined] that no nuisance or public health hazard is presented</li> <li>- all vehicles used for the transportation of this material bear the name of the company or licensee and have a clean exterior condition at all times</li> <li>- no defective or leaking equipment is used in cleaning operations</li> <li>- all vehicles or equipment are stored in a clean condition when not in use</li> <li>- water used for rinsing vehicles or equipment is considered sewage and is disposed of in a sanitary manner approved by the local Director of Health.</li> </ul> <p>Verify that no sewage is allowed to discharge or flow into any storm drain, gutter, street, roadway, or public place and that no sewage is discharged onto any private property which creates a nuisance or condition detrimental to health.</p> <p>Verify that subsurface sewage disposal systems are designed, installed, and operated as specified in the <i>Technical Standards for Subsurface Sewage Disposal Systems</i>, published by the Commissioner of Health Services.</p> <p>Verify that large subsurface sewage disposal systems (those serving a building with a designed sewage flow of 2000 gpd or greater) are constructed, repaired,</p>

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<p>systems must meet specific requirements for any construction, repair, alteration, or extension (Conn. Agencies Regs. 19-13-B103d(b) through (d) and (f)).</p> <p><b>WA.100.6.CT.</b> Onsite household and small commercial subsurface sewage disposal systems with a capacity of 5000 gpd or less and nondischarging toilet systems must meet permitting requirements (Conn. Agencies Regs. 19-13-B103e).</p> <p><b>WA.100.7.CT.</b> Onsite domestic sewage disposal systems receiving flows greater than 5000 gpd, community sewage systems which utilize land treatment and disposal, alternative onsite sewage treatment systems, and septage disposal systems which utilize land treatment and disposal must meet construction requirements (Conn. Agencies Regs. 19-13-B104c(f) through (h) and B104d(b) through (e)).</p>	<p>altered, or extended according to plans approved by the Commissioner.</p> <p>Verify that each building is served by a separate subsurface sewage disposal system located on the same lot as the building served.</p> <p>Verify that disposal systems for sinks, tubs, showers, laundries, and other gray water from residential buildings, where no water flush toilet fixtures are connected, are constructed with a septic tank and leaching system at least one-half the capacity specified for the required residential sewage disposal system.</p> <p>Verify that approval to construct is obtained from the local Director of Health prior to any subsurface sewage disposal system construction, alteration, repair, or extension.</p> <p>Verify that a discharge permit is obtained prior to any discharge to a subsurface sewage disposal system.</p> <p>(NOTE: These systems must also meet all the requirements listed in WA.100.7.CT, except for the first item listed therein.)</p> <p>Verify that persons who intend to conduct site investigations for the purpose of designing or constructing any septage or sewage disposal system notify the local Director of Health of the time and place of the investigations in a timely manner which allows for the Director to attend the investigations.</p> <p>Verify that design plans are approved by the Commissioner of Health Services for proposed sewage or septage disposal systems.</p> <p>Verify that persons who intend to construct sewage or septage disposal systems file final construction plans with the local Director of Health at least 2 working days prior to the start of construction.</p> <p>Verify that all structures or facilities for the treatment or disposal of sewage or septage are located at least 50 ft from any open water source and 100 ft from any public supply reservoir, unless designed and constructed to prevent leakage or overflow of raw or treated sewage to the ground or surface water.</p> <p>Verify that all structures, facilities, or locations containing sewage or septage which is exposed to the atmosphere are located at least 150 ft from any school, residential building, or institution and that they are fenced or otherwise made inaccessible to the public.</p> <p>Verify that the separation distances specified in Appendix 12-2 are met.</p>



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## Appendix 12-1

### Effluent Limitations for Process Wastewater Discharges (Source: Conn. Agencies Regs. 22a-430-4(s)(2))

Parameter	Allowable Effluent Concentrations (mg/L) <sup>1, 4</sup>		
	Average Monthly	Maximum Daily	Maximum Instantaneous <sup>2</sup>
Aluminum <sup>4</sup>	2.0	4.0	6.0
Barium	2.0	4.0	6.0
Cadmium	0.1 (0.07)	0.5 (0.11)	0.75
Chromium, hexavalent <sup>4</sup>	0.1	0.2	0.3
Chromium, total	1.0	2.0	3.0
Copper	1.0	2.0	3.0
Cyanide, amenable <sup>3</sup>	0.1	0.2	0.3
Cyanide, total	0.65	1.2	--
Fluoride	20.0	30.0	45.0
Gold	0.1	0.5	0.75
Iron <sup>4</sup>	3.0	5.0	7.5
Lead	0.1	0.5	0.75
Nickel	1.0	2.0	3.0
Silver	0.1	0.5	0.75
Tin	2.0	4.0	6.0
Zinc	1.0	2.0	3.0
Total suspended solids <sup>4</sup>	20.0	30.0	45.0
Oil and grease <sup>4</sup>	10.0	--	20.0

- 1 All values are for new and existing discharges except for cadmium, in which case the numbers in parentheses are for new discharges only.
- 2 As determined by a grab sample.
- 3 All values are for the effluent from the treatment system prior to mixing with any other wastewaters or discharges, except that the Commissioner may apply the limitations for hexavalent chromium and/or amenable cyanide at the discharges from the chromium reduction and cyanide destruction systems, respectively, if in his/her opinion the flow from the system is too low in relation to the total flow from the treatment system to allow a meaningful or accurate measurement at the final discharge. Such alternate limitations may not result in greater quantities of these substances being discharged than those which would be discharged if the limitations specified above were applied at the effluent from the treatment system.
- 4 These limitations apply only to NPDES permits.



## Appendix 12-2

### Minimum Separation Distances

(Source: Conn. Agencies Regs. 19-13-B104d(d) and (e))

The following minimum separation distances are to be maintained between any discharge or overflow of raw or treated sewage or septage to the groundwaters and any drinking water supply well or spring:

Required Withdrawal Rate (gal/min)	Minimum Separation Distance (ft)
under 10	75
10 to 50	150
over 50	200

The following minimum separation distances are to be maintained between any sewer, structure, or facility for the conveyance or treatment of sewage or septage and any drinking water supply well or spring:

Required Withdrawal Rate (gal/min)	Minimum Separation Distance (ft)
under 10	25
10 to 50	75
over 50	100

## SECTION 13

### WATER QUALITY MANAGEMENT

#### Connecticut Supplement, October 1997

This section covers the state requirements for Water Quality Management and is intended to supplement the U.S. TEAM Guide. Refer to the U.S. TEAM Guide and the DOD Component Supplements for Federal, DOD, and service-specific requirements.

#### Definitions

- *Adequate Margin of Safety* - an excess of available water over average daily demand (Connecticut General Statutes, Title 25, Part 32d, Section 1(a)(1), (Conn. Agencies Regs. 25-32d-1(a)(1))).
- *Adequate Water Supply* - a quantity of potable water sufficient to meet average and peak demands even in a critical dry period with a 1 percent chance of occurrence (Conn. Agencies Regs. 25-32d-1(a)(2)).
- *Available Water* - the maximum amount of water a company can dependably supply (Conn. Agencies Regs. 25-32d-1(a)(3)).
- *Casing* - an impervious, durable pipe or sidewall placed in a well to prevent the walls from caving in, or to seal off surface drainage or undesirable water, gas, or other fluids so they cannot enter the well (Conn. Agencies Regs. 19-13-B51b(10)).
- *Commissioner* - the Commissioner of the Connecticut Department of Health Services (Conn. Agencies Regs. 25-32d-1(a)(5)).
- *Community Water System* - a public water system that serves at least 25 residents throughout the year (Conn. Agencies Regs. 19-13-B102(a)(6)).
- *Compliance Period* - a 3 calendar-year period within a compliance cycle. Each compliance cycle has three 3-yr compliance periods. Within the first compliance cycle, the first compliance period runs from 1 January 1993 to 31 December 1995; the second from 1 January 1996 to 31 December 1998; and the third from 1 January 1999 to 31 December 2001 (Conn. Agencies Regs. 19-13-B102(a)(8)).
- *Consecutive Public Water System* - a public water system that purchases all of its water from another public water system and does not operate or control any other sources of supply (Conn. Agencies Regs. 19-13-B102(a)(11)).
- *Department* - the Connecticut Department of Public Health and Addiction Services (Conn. Agencies Regs. 19-13-B102(a)(17)).
- *Disinfection* - a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents (Conn. Agencies Regs. 19-13-B102(a)(21)).
- *Filtration* - a process for removing particulate matter from water by passage through porous media (Conn. Agencies Regs. 19-13-B102(a)(27)).
- *Lead Service Line* - a service line made of lead that connects the water main to a building inlet and any lead pigtail, gooseneck, or other fitting connected to the lead line (Conn. Agencies Regs. 19-13-B102(a)(33)).

- *Maximum Contaminant Level (MCL)* - the maximum permissible level of a contaminant in water that is delivered to any consumer of a public water system (Conn. Agencies Regs. 19-13-B102(a)(36)).
- *Noncommunity Water System* - a public water system that serves at least 25 persons at least 60 days out of the year and is not a community or a seasonal water system (Conn. Agencies Regs. 19-13-B102(a)(41)).
- *Nontransient, Noncommunity (NTNC) Water System* - a public water system that is not a community system and that regularly serves at least 25 of the same persons over 6 mo/yr (Conn. Agencies Regs. 19-13-B102(a)(42)).
- *Off-Watershed Class II Land* - all land owned by a water company which is completely off a public drinking supply watershed and which is within 150 ft of a distribution reservoir or a first-order stream tributary to a distribution reservoir (Conn. Agencies Regs. 25-37c-1(d)(2)).
- *Pollution* - the adverse effect on water quality created by the introduction of any matter (Conn. Agencies Regs. 19-13-B51b(12)).
- *Private Water Supplies* - any source of water supply serving a single residence and used for drinking or other domestic use (Conn. Agencies Regs. 19-13-B101(a)(1)).
- *Public Supply Well* - a water supply well used or made available by a water company to two or more consumers (Conn. Agencies Regs. 19-13-B51b(Conn. Agencies Regs. 19)).
- *Public Water System* - any water company supplying water to 15 or more consumers or 25 or more persons daily at least 60 days of the year (Conn. Agencies Regs. 19-13-B102(a)(49)).
- *Sanitary Survey* - an onsite inspection of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of the items inspected for producing and distributing safe drinking water (Conn. Agencies Regs. 19-13-B102(a)(56)).
- *Seasonal Water System* - a public water system that operates on a seasonal basis for less than 6 mo per calendar year (Conn. Agencies Regs. 19-13-B102(a)(57)).
- *Second Compliance Period* - the second full 3-yr compliance period in the first compliance cycle. The second compliance period runs from 1 January 1996 to 31 December 1998 (Conn. Agencies Regs. 19-13-B102(a)(58)).
- *Sewer* - a conduit or pipe used or intended for conveying sewage or other contaminated wastes, or a conduit/pipe into which sewage or wastes may back up (Conn. Agencies Regs. 19-13-B51b(13)).
- *Source of Pollution* - any place or condition which may result in pollution of a groundwater supply; it may include a stream, pond, sewer, privy, septic tank, tile field, cesspool, sewage, sewage treatment unit, industrial waste, industrial waste disposal unit, location where animal excrement is allowed to accumulate, or disposal site for refuse, industrial waste, sewage sludge, or industrial waste sludge (Conn. Agencies Regs. 19-13-B51b(14)).
- *Special Purpose Sample* - a sample that is taken to determine whether disinfection practices are sufficient following routine maintenance work on the distribution system (Conn. Agencies Regs. 19-13-B102(a)(65)).
- *Transient, Noncommunity Water System* - a noncommunity water system that does not meet the definition of a nontransient noncommunity water system (Conn. Agencies Regs. 19-13-B102(a)(71)).
- *Water Company* - any water company as defined in Section 25-32a of the General Statutes (Conn. Agencies Regs. 25-37c-1(r)).
- *Water Supply Well* - an artificial excavation for the purpose of getting water for drinking or other domestic use (Conn. Agencies Regs. 19-13-B51b(1)).

- *Water Well* - an artificial excavation or opening in the ground, by which groundwater can be obtained or through which it flows under natural pressure or is artificially withdrawn (Conn. Agencies Regs. 25-128-36(c)(24)).
- *Watershed Land* - land from which water drains into a public drinking water supply, including land lying underneath watercourses that are tributary to a public drinking water supply (Conn. Agencies Regs. 25-37c-1(t)).
- *Well Contractor* - any person, firm, or corporation drilling or constructing a water supply well (Conn. Agencies Regs. 19-13-B51b(2)).
- *Well Pit* - a structure built wholly or partly underground to house the well top or well appurtenances or both (Conn. Agencies Regs. 19-13-B51b(17)).

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GUIDANCE FOR APPENDIX USERS		
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<p><b>WQ.5. STATE REQUIREMENTS FOR WATER SYSTEMS</b></p> <p><b>WQ.5.1.CT.</b> Public water systems must meet certified laboratory and personnel requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(L), (g), and 25-32-9(a)).</p> <p><b>WQ.5.2.CT.</b> Water companies serving 1000 or more persons or 250 or more consumers must meet water supply plan requirements (Conn. Agencies Regs. 25-32d-1(b) and (i)(2) and (3)).</p>	<p>Verify that analytical methods for all inorganic chemicals (IOC), organic chemicals (SOC), volatile organic chemicals (VOC), and TTHMs conform to those approved by the USEPA.</p> <p>Verify that analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature are conducted using the methods prescribed in 40 CFR 141.89.</p> <p>Verify that community water supply treatment plants have at least one operator who is certified at the plant's class, or higher, and who is designated by the utility as the chief operator.</p> <p>Verify that, in the event the chief operator is not available, the utility places an operator, who is certified at the plant's class or higher, in direct responsible charge to serve in the interim.</p> <p>Verify that water companies serving 1000 or more persons or 250 or more consumers, or those required to do so by the Department, have a Commissioner-approved water supply plan.</p> <p>Verify that water companies implement the approved plan and meet all applicable state agency regulatory programs and statutory requirements in implementation of the plan.</p> <p>Verify that companies do not extend service to new customers without Department approval if the projected demand on the water system plus an adequate margin of safety will exceed the available water of the system.</p>

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<p><b>PUBLIC WATER SYSTEMS</b></p> <p><b>WQ.10. General</b></p> <p><b>WQ.10.1.CT.</b> Public water systems must have approval prior to the addition of any chemicals to public water supplies (Conn. Agencies Regs. 19-13-B80).</p> <p><b>WQ.10.2.CT.</b> Public water systems must meet sanitary survey requirements (Conn. Agencies Regs. 19-13-B102(b) and (e)(7)(E)).</p> <p><b>WQ.10.3.CT.</b> Public water systems must meet site location requirements (Conn. Agencies Regs. 19-13-B102(d)).</p>	<p>Verify that public water systems have the approval of the Commissioner prior to the addition of any chemicals, whether during the course of filtration, for control of plant or animal life, or for any other purpose, to public water supplies.</p> <p>Verify that public water systems have the approval of the Commissioner prior to the installation of any equipment for the addition of chemicals to public water supplies.</p> <p>Verify that public water systems having an active surface water source of supply conduct a sanitary survey of the watershed to the intake at least annually and submit a survey report to the State Health Department by 1 March each year which covers the preceding calendar year.</p> <p>Verify that public water systems (including, but not limited to, treatment plants, pumping stations, storage tanks, etc., but not including water intakes and connecting pipelines) meet the following site location requirements:</p> <ul style="list-style-type: none"> <li>- above the level of the 100-yr flood</li> <li>- where chlorine gas will not be stored or used within 300 ft of any residence</li> <li>- where the facility is not likely to be subject to fires or other natural or manmade disasters.</li> </ul> <p>Verify that approval of the State Health Department is obtained prior to commencing construction.</p> <p>(NOTE: This includes construction of supply and treatment works, transmission lines, storage tanks, pumping stations, and other works of sanitary significance. It does not include the routine extension of laterals or tapping of new service connections.)</p>

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<b>WQ.10.4.CT.</b> Public water systems must meet distribution system protection requirements (Conn. Agencies Regs. 19-13-B102(f)).	<p>Verify that all service connections have a water pressure at the main of at least 25 psi under normal conditions and that, where pressure is normally less than 25 psi, special provision is made to furnish adequate service to the user.</p> <p>Verify that suppliers of water to community water systems report the following information to the State Health Department by 1 March of each year covering the preceding calendar year:</p> <ul style="list-style-type: none"> <li>- a list of all consumer premises where: <ul style="list-style-type: none"> <li>- a private source of water supply is known to exist</li> <li>- toxic or objectionable chemical or biological substances are used in water solution on public, commercial, or industrial premises</li> <li>- water pressure is raised by pumping on other than residential premises above that furnished by the supplier</li> <li>- there is a water storage tank for other than residential use, commercial swimming pool, or commercial water filter</li> <li>- there is known to be a sprinkler system for either fire protection or irrigation</li> </ul> </li> <li>- date of last inspection of each consumer premises listed above and the number of violations detected of the Public Health Code regulations relating to water distribution systems and the status of correction of these violations.</li> </ul> <p>(NOTE: Item number two in the above list of consumer premises is to be inspected at least once per year and the remaining items at least once every 5 yr.)</p> <p>Verify that all water storage tanks connected to a public water distribution system are constructed and located so as to adequately protect the water from contamination.</p> <p>Verify that tanks and basins meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are covered</li> <li>- vents and overflow pipes are screened</li> <li>- are not directly connected to sanitary sewers or to storm drainage systems</li> <li>- are at least 50 ft from the nearest sanitary sewer, unless the sewer is constructed of ductile or cast iron or prestressed concrete pressure pipe, steel cylinder type with a gasketed joint, in which case it is no closer than 25 ft.</li> </ul> <p>Verify that the following requirements are met where there are existing uncovered tanks or basins:</p> <ul style="list-style-type: none"> <li>- a free chlorine residual of at least 0.2 mg/L is maintained at all times and tested for at least daily</li> <li>- water leaving the tank or basin meets physical and microbiological requirements in at least weekly samples</li> <li>- a schedule is adopted for completing the installation of a satisfactory cover within 5 yr of 23 August 1994.</li> </ul>

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<p><b>WQ.10.5.CT.</b> Interconnec- tions must meet approval requirements (Conn. Agencies Regs. 19-13-B51c).</p>	<p>Verify that the distribution system is flushed as required to maintain it free from excessive accumulation of sediment, organic growths, products of corrosion and erosion, and other extraneous matter.</p> <p>Verify that physical connections between piping carrying water from a public water supply and piping carrying water from any other source are approved by the Commissioner.</p>

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<p><b>PUBLIC WATER SYSTEMS</b></p> <p><b>WQ.15. Monitoring/Sampling</b></p> <p><b>WQ.15.1.CT.</b> Public water systems must meet untreated water quality parameters prior to treatment (Conn. Agencies Regs. 19-13-B102(c)).</p> <p><b>WQ.15.2.CT.</b> Public water systems must meet general water quality parameters for water ready for consumption (Conn. Agencies Regs. 19-13-B102(e)(1)).</p> <p><b>WQ.15.3.CT.</b> Public water systems must meet total coliform MCL and monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(6)(B)(i), (ii), (C),</p>	<p>Verify that the parameters specified in the two tables in Appendix 13-1 are tested for at each surface source at least annually, except bacteriological and physical tests, which are done quarterly.</p> <p>(NOTE: Groundwater sources are to be tested for these parameters when the Department determines that the source is vulnerable to contamination.)</p> <p>Verify that the following water quality parameters are met for water which is ready for consumption:</p> <ul style="list-style-type: none"> <li>- color does not exceed 15 standard units in water leaving the treatment plant nor in water at representative sampling points in the distribution system</li> <li>- turbidity does not exceed 5 NTU at representative sampling points in the distribution system</li> <li>- odor does not exceed a value of two in the treatment plant effluent on a scale of 0 to 5 where: <ul style="list-style-type: none"> <li>- 0 = none</li> <li>- 1 = very faint</li> <li>- 2 = faint</li> <li>- 3 = distinct</li> <li>- 4 = decided</li> <li>- 5 = strong</li> </ul> </li> <li>- for systems not required to install optimal corrosion control treatment, pH is not less than 6.4 nor exceeds 10.0 in water entering the distribution system.</li> </ul> <p>Verify that coliform systems determine compliance with the total coliform MCL each month that it is required to monitor for total.</p> <p>Verify that noncommunity water systems using only groundwater, except groundwater under the direct influence of surface water, and serving 1000 persons or fewer monitor each calendar quarter that the system provides water to</p>

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<p>(7)(A), and (B)).</p>	<p>the public.</p> <p>Verify that noncommunity water systems using only groundwater, except groundwater under the direct influence of surface water, and serving more than 1000 persons during any month monitor at the same frequency as a like-sized community water system.</p> <p>Verify that noncommunity water systems using surface water, in total or in part, monitor at the same frequency as a like-sized community water system.</p> <p>Verify that noncommunity water systems using groundwater under the direct influence of surface water monitor at the same frequency as a like-sized community water system.</p> <p>(NOTE: Noncommunity water systems are required to begin monitoring at this frequency beginning 6 mo after the Department determines that the groundwater is under the direct influence of surface water.)</p>
<p><b>WQ.15.4.CT.</b> Public water systems with total coliform-positive samples must meet repeat monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(G) and (J)).</p>	<p>Verify that, if a system collects fewer than five routine samples per month and has one or more valid total coliform-positive samples, the system collects at least five routine samples during the next month the system provides water to the public.</p> <p>(NOTE: If, after a system collects a routine sample and before it learns the results of the analysis of that sample, it collects another routine sample(s) from within five adjacent service connections of the initial sample, and the initial sample after analysis is found to contain total coliforms, then the system may count the subsequent sample(s) as a repeat sample(s) instead of as a routine sample(s).)</p> <p>Verify that results of all routine and repeat samples not invalidated by the Department are included in determining compliance with the MCL for total coliforms and that special purpose samples are not used in this compliance determination.</p> <p>(NOTE: In the event of a total coliform sample being invalidated due to heterotrophic bacteria interference, systems are required to collect another sample from the same location within 24 h of being notified of the interference problem. If heterotrophic bacteria interference occurs in repeat samples, the system must continue to resample the same location within 24 h until an acceptable sample is obtained. The results of the acceptable sample are to be included in compliance calculations.)</p>
<p><b>WQ.15.5.CT.</b> Public water</p>	<p>Verify that, when fluoride content is artificially adjusted, tests for fluoride are</p>

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systems must meet fluoride monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(L)).	<p>made on each fluoridated source at least daily.</p> <p>Verify that the fluoride content of these supplies are maintained between 0.8 mg/L and 1.2 mg/L.</p> <p>Verify that, if the monthly average of the daily tests does not meet these requirements, the violation is reported.</p> <p>Verify that, if warranted by conditions that may be detrimental to the health of consumers, samples from each fluoridated source are submitted to the Department for testing.</p>
<b>WQ.15.6.CT.</b> Public water systems must meet pH monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(N)).	Verify that, when the pH value is artificially adjusted, daily tests for pH value are made for the treated water, or as specified by the Department.
<b>WQ.15.7.CT.</b> Public water systems must meet treatment technique requirements for acrylamide and epichlorohydrin (Conn. Agencies Regs. 19-13-B102(j)(5)).	Verify that systems annually provide written certification to the Department, using third party or manufacturer's certification, that when acrylamide and epichlorohydrin are used in drinking water systems, the combination, or product, of dose and monomer level does not exceed the levels specified in 40 CFR 141.111.
<b>WQ.15.8.CT.</b> Public water systems must meet reservoir, groundwater, and water use monitoring requirements (Conn. Agencies Regs. 19-13-B102(n), (q), and (s)).	<p>Verify that meters are provided at all sources of water supply for community water systems and that representative weekly readings of instantaneous flow rate and total quantity of water delivered over the previous week are taken, recorded, and retained.</p> <p>Verify that any water company maintaining a reservoir submits records of reservoir status to the Department according to a schedule specified by the Department.</p> <p>Verify that any water company with a groundwater source in an unconsolidated, unconfined aquifer submits records of groundwater status to the Department according to a schedule specified by the Department.</p> <p>Verify that a system of observation wells approved by the Department are maintained to provide sufficient information on groundwater elevations and</p>

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	<p>groundwater quality.</p> <p>Verify that any water company serving more than 1000 people or 250 service connections submits to the Department records of water use according to a schedule specified by the Department.</p> <p>Verify that essential water supply valves are maintained in operating condition.</p> <p>Verify that an approved program to reduce to amount of water which cannot be accounted for is established.</p>



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<p><b>PUBLIC WATER SYSTEMS</b></p> <p><b>WQ.20. Disinfection and Filtration</b></p> <p><b>WQ.20.1.CT.</b> Public water systems must meet residual chlorine monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(M)).</p>	<p>Verify that, when the water is chlorinated, at least daily tests are made for residual chlorine.</p> <p>Verify that surface water systems expose water entering the distribution system to a free chlorine residual of at least 0.3 mg/L for at least 30 min, or the equivalent as determined by the Department.</p> <p>Verify that, when well systems are chlorinated, a free chlorine residual of at least 0.2 mg/L after 10 min contact, or the equivalent, is used.</p>

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<b>PUBLIC WATER SYSTEMS</b>	
<b>WQ.25. Lead and Copper</b>	
<b>WQ.25.1.CT.</b> Public water systems exceeding the lead or copper action level must meet corrosion control treatment requirements (Conn. Agencies Regs. 19-13-B102(j)(8)(A), (E), and (G)).	<p>Verify that small and medium-size water systems exceeding the lead or copper action level recommend installation of one or more of the corrosion control treatments which the system believes constitutes optimal corrosion control for that system.</p> <p>Verify that systems properly [undefined] install and operate throughout the distribution system the optimal corrosion control treatment designated by the Department.</p> <p>Verify that systems maintain water quality parameter values at or above minimum values, or within ranges designated by the Department, in each sample collected for monitoring after implementation of corrosion control treatment.</p>
<b>WQ.25.2.CT.</b> Public water systems must meet source water treatment requirements (Conn. Agencies Regs. 19-13-B102(j)(9)).	<p>Verify that systems which exceed the lead or copper action level recommend to the Department the installation and operation of one of the following source water treatments:</p> <ul style="list-style-type: none"> <li>- ion exchange</li> <li>- reverse osmosis</li> <li>- lime softening</li> <li>- coagulation/filtration.</li> </ul> <p>Verify that systems properly [undefined] install and operate the source water treatment designated by the Department.</p> <p>Verify that systems maintain lead and copper levels below 0.005 mg/L and 0.5 mg/L, respectively, at each sampling point monitored.</p>
<b>WQ.25.3.CT.</b> Public water systems must meet monitoring requirements for lead and copper in tap water (Conn. Agencies Regs. 19-13-	<p>(NOTE: The regulations for sample site location, number of samples, and timing of monitoring are essentially the same as the Federal regulations. See the U.S. TEAM Guide for specific requirements.)</p> <p>Verify that systems use the information on lead, copper, and galvanized steel</p>

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B102(e)(8)(A) and (C) through (E)).	<p>when conducting a materials evaluation.</p> <p>Verify that, when a materials evaluation is insufficient to locate the requisite number of lead and copper sampling sites that meet the targeting criteria, systems review the sources of information listed below in order to identify a sufficient number of sampling sites and seeks to collect this information where possible in the course of its normal operations:</p> <ul style="list-style-type: none"> <li>- all plumbing codes, permits, and records in the files of the building department(s) which indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system</li> <li>- all inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system</li> <li>- all existing water quality information, including the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.</li> </ul> <p>Verify that systems whose sampling pool does not consist exclusively of tier 1 sites submits a letter to the Executive Secretary explaining why a review of the information above was inadequate to locate a sufficient number of tier 1 sites.</p> <p>Verify that a community system which includes tier 3 sampling sites in its sampling pool submits a letter to the Executive Secretary explaining why it was unable to locate a sufficient number of tier 1 and tier 2 sampling sites.</p> <p>Verify that systems with insufficient tier 1, tier 2, and tier 3 sampling sites complete the sampling pool with randomly selected sampling sites and that, for each monitoring period, a minimum of 20 percent of the randomly selected sampling sites are relocated to new sites, when available.</p> <p>Verify that systems with lead service lines contained in the distribution system draw 50 percent of samples from sites that contain lead pipes, or copper pipes with lead solder, and 50 percent of the samples from sites served by a lead service line.</p> <p>Verify that systems which cannot identify a sufficient number of sampling sites served by a lead service line submit a letter to the Department demonstrating why they were unable to do so and that the systems collect first-draw samples from all of the sites identified as being served by such lines.</p> <p>Verify that the results of any monitoring conducted in addition to the minimum requirements are considered by the system and the Department in making any determinations (i.e., calculating the 90th percentile lead or copper level).</p>

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<p><b>WQ.25.4.CT.</b> Public water systems must meet sample collection requirements for lead and copper in tap water (Conn. Agencies Regs. 19-13-B102(e)(8)(B)).</p>	<p>Verify that each first-draw tap sample for lead and copper is 1 L and stood motionless in the plumbing system of each sampling site for at least 6 h.</p> <p>Verify that first-draw samples from:</p> <ul style="list-style-type: none"> <li>- residential housing are collected from the cold-water kitchen tap or bathroom sink tap</li> <li>- nonresidential buildings are collected at an interior tap from which water is typically drawn for consumption.</li> </ul> <p>(NOTE: First-draw samples may be collected by the system or the residents after instruction on sampling procedures. Acidification of first-draw samples may be done up to 14 days after the sample is collected. If the sample is not acidified immediately after collection, the sample must stand in the original container for at least 28 h after acidification. If a system allows residents to perform sampling, the system may not challenge the accuracy of sampling results.)</p> <p>Verify that each service line sample is 1 L and stood motionless in the lead service line for at least 6 h.</p> <p>Verify that service line samples are collected in one of the following ways:</p> <ul style="list-style-type: none"> <li>- at the tap after flushing the volume of water between the tap and the lead service line</li> <li>- tapping directly into the lead service line</li> <li>- if the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.</li> </ul> <p>Verify that systems collect each first-draw tap sample from the same sampling site from which it collected a previous sample.</p> <p>(NOTE: If for any reason the system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria and is within reasonable proximity of the original site.)</p>
<p><b>WQ.25.5.CT.</b> Public water systems must meet monitoring requirements for lead and copper in source water (Conn. Agencies Regs. 19-13-B102(e)(10)) [Revised]</p>	<p>Verify that systems which fail to meet the lead or copper action levels in tap water collect source water samples in accordance with the requirements regarding sample location, number of samples, and collection methods specified in 40 CFR 141.23(a)(1) through (4) (inorganic chemical sampling).</p> <p>Verify that systems which exceed the lead or copper action levels at the tap collect one source water sample from each entry point to the distribution system</p>

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<p>October 1997].</p>	<p>within 6 mo after the exceedance.</p> <p>Verify that after systems install source water treatment collect an additional source water sample from each entry point to the distribution system during two consecutive 6-mo monitoring periods within 36 mo of completion of the Departmental determination of source water treatment.</p> <p>Verify that systems monitor at the frequency specified below in cases where the Department determines that the system is not required to install source water treatment:</p> <ul style="list-style-type: none"> <li>- systems using only groundwater; once during the 3-yr compliance period in effect when the Department determination is made and once during each subsequent compliance period</li> <li>- systems using surface water, or a combination of surface and groundwater; once during each year (the first annual monitoring period begins on the date the Department determination is made).</li> </ul> <p>(NOTE: A system is not required to conduct source water sampling for lead and/or copper if the system meets the action level for the contaminant in tap water samples during the entire source water sampling period applicable to the system.)</p>
<p><b>WQ.25.6.CT.</b> Public water systems which exceed the lead action level in tap samples must meet public education requirements (Conn. Agencies Regs. 19-13-B102(i)(6)).</p>	<p>Verify that systems which exceed the lead action level in tap samples deliver the public education materials contained in 40 CFR 141.85(a) and (b) in accordance with the requirements in 40 CFR 141.85(c) within 60 days after the end of the monitoring period in which the exceedance occurs.</p>

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**PUBLIC WATER  
SYSTEMS**

**WQ.30.  
Notification and Reporting  
Requirements**

**WQ.30.1.CT.** Public water systems which exceed the total coliform MCL or fail to comply with a coliform monitoring requirement must meet reporting and public notification requirements (Conn. Agencies Regs. 19-13-B102(h)(1) and (2)).

**WQ.30.2.CT.** Public water systems must meet public notification requirements (Conn. Agencies Regs. 19-13-B102(i)(1) through (4)).

Verify that systems which exceed the MCL for total coliforms report the violation to the Department by the end of the next business day after it learns of the violation and notify the public.

Verify that systems which fail to meet a coliform monitoring requirement, including the sanitary survey requirement, report the monitoring violation to the Department within 10 days after the system discovers the violation and notify the public.

Verify that systems which violate monitoring requirements, testing procedures, or are subject to a variance or exemption meet the following public notification requirements:

- give public notice within 3 mo of the violation or granting of a variance or exemption
- give notice in a daily newspaper of general circulation or by publication in a weekly newspaper of general circulation if there is no daily paper
- give notice by hand delivery or by continuous posting, for as long as the violation, variance, or exemption exists, in conspicuous places within the area served by the system if there is no daily or weekly newspaper of general circulation
- following the initial notice, give notice at least once every 3 mo by mail delivery or by hand delivery for as long as the violation, variance, or exemption exist.

(NOTE: If a system has a distribution system separable from other parts of the distribution system with no interconnections, the Department may allow the system to give public notice to only the area served by that portion of the system which is out of compliance.)

Verify that community water systems give a copy of any notice published within the last 6-mo period to all new billing units or new hookups, prior to or at the

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	<p>time service begins.</p> <p>Verify that each public notice meets the following general content requirements:</p> <ul style="list-style-type: none"> <li>- provides a clear and readily understandable explanation of the violation</li> <li>- lists any potential adverse health effects</li> <li>- specifies the population at risk</li> <li>- identifies the steps that the system is taking to correct the violation</li> <li>- indicates the necessity for seeking alternative water supplies, if any</li> <li>- specifies any preventative measures the consumer should take until the violation is corrected</li> <li>- each notice is conspicuous and does not contain unduly technical language, unduly small print, or similar problems that frustrate the purpose of the notice</li> <li>- each notice includes the address and telephone number of the owner, operator, or designee of the system as a source of additional information concerning the notice</li> <li>- systems which serve a substantial number [undefined] of non-English speaking persons give the notice in the primary language(s) of the customers</li> <li>- uses the mandatory health effects language specified in 40 CFR 141.32.</li> </ul>

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<p><b>COMMUNITY WATER SYSTEMS</b></p> <p><b>WQ.35. Standards</b></p> <p><b>WQ.35.1.CT.</b> Community water systems must meet IOC, SOC, VOC, TTHM, and radioactivity MCL requirements (Conn. Agencies Regs. 19-13-B102(e)(2) through (5)).</p> <p><b>WQ.35.2.CT.</b> Community water systems must meet capacity requirements (Conn. Agencies Regs. 19-13-B102(o) and (p)).</p>	<p>(NOTE: The MCL for silver is 0.05 mg/L. The MCL for chloride is 250 mg/L. The MCL for sodium is 28.0 mg/L. The MCL for chlorobenzene is 0.1 mg/L.)</p> <p>Verify that groundwater systems monitor quarterly for vinyl chloride when one or more of the following compounds is detected:</p> <ul style="list-style-type: none"> <li>- trichloroethylene</li> <li>- 1,2 tetrachloroethylene</li> <li>- 1,2 dichloroethane</li> <li>- 1,1,1 trichloroethane</li> <li>- cis 1,2 dichloroethylene</li> <li>- trans 1,2 dichloroethylene</li> <li>- 1,1 dichloroethylene.</li> </ul> <p>(NOTE: If the first analysis does not detect vinyl chloride, the Department may reduce the frequency of monitoring to once every 3 yr.)</p> <p>Verify that systems meet the following MCLs for radiological contaminants:</p> <ul style="list-style-type: none"> <li>- 20,000 pCi/L for tritium</li> <li>- 8 pCi/L for strontium-90</li> <li>- 50 pCi/L for gross beta radioactivity.</li> </ul> <p>Verify that the supply capacity of each system is maintained in excess of the demand of the system with sufficient margin of safety to properly allow for the following:</p> <ul style="list-style-type: none"> <li>- sudden increases in consumption which may occur during a dry period</li> <li>- the time required to bring new sources of supply on line</li> <li>- increases or growth in the service area which may be reasonably expected.</li> </ul> <p>Verify that a plan is prepared for each system relating the safe yield of the supply system to the existing and projected demands of the service area and that the plan is updated on a regular basis.</p>



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	<p>Verify that, if for any reason it becomes evident that demands of the service area will exceed the supply capability of the system for a significant period of time, measures to effectively reduce consumption are promptly instituted for the system and a program to provide sufficient supply capacity to meet existing and projected demands is implemented.</p> <p>Verify that sources of supply, treatment, pumping, transmission, and storage facilities of sufficient capacity are maintained to provide flows in excess of the maximum flows experienced in the system and in individual service zones within integrated systems.</p> <p>Verify that, whenever peak period consumption interrupts water service to consumers under normal conditions, conservation measures that effectively reduce consumption are promptly instituted for the water supply and a program to provide sufficient supply, treatment, pumping, transmission, and storage capacity to meet existing and projected peak period consumption is implemented.</p>

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<p><b>COMMUNITY WATER SYSTEMS</b></p> <p><b>WQ.40. Monitoring/Sampling</b></p> <p><b>WQ.40.1.CT.</b> Community water systems must meet IOC, SOC, VOC, and TTHM monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(4)(i), (7)(c), (D), and (O)).</p>	<p>Verify that systems serving fewer than 150 service connections begin monitoring in the second compliance period for the following chemicals:</p> <ul style="list-style-type: none"> <li>- benzo(a)pyrene</li> <li>- dalapon</li> <li>- di(2-ethylhexyl) adipate</li> <li>- di(2-ethylhexyl) phthalate</li> <li>- dinoseb</li> <li>- diquat</li> <li>- endothall</li> <li>- endrin</li> <li>- glyphosate</li> <li>- hexachlorobenzene</li> <li>- hexachlorocyclopentadiene</li> <li>- oxamyl (vydate)</li> <li>- picloram</li> <li>- simazine</li> <li>- 2,3,7,8-TCDD (dioxin).</li> </ul> <p>Verify that systems monitor at the time designated by the Department within each compliance period.</p> <p>(NOTE: With the exception of nitrate, nitrite, and TTHM, the Department may allow the use of monitoring data collected after 1 January 1990 to satisfy the base sampling requirement. Systems which use grandfathered samples of organic chemicals and did not detect any VOC must monitor annually beginning 1 January 1993.)</p> <p>Verify that surface water sources are tested for TTHMs quarterly.</p> <p>Verify that TTHM samples are collected in the distribution system at a location(s) approved by the Department.</p> <p>Verify that systems which serve a population of 10,000 or more meet the TTHM requirements in 40 CFR 141.30.</p>

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<p><b>WQ.40.2.CT.</b> Community water systems which exceed MCLs must meet confirmation sampling requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(P)).</p> <p><b>WQ.40.3.CT.</b> Community water systems must meet compliance calculation requirements for IOCs, SOCs, VOCs, and TTHMs (Conn. Agencies Regs. 19-13-B102(e)(7)(Q)(i) and (iv)).</p>	<p>(NOTE: Systems using groundwater sources which are not under the direct influence of surface water and serve 1000 persons or fewer may collect all required samples on a single day if they are taken from different sites.)</p> <p>(NOTE: Consecutive water systems need not monitor for IOCs, SOCs, VOCs, TTHMs, or radioactive substances but must monitor for lead, copper, and asbestos. The Department may waive asbestos testing requirements if consecutive water systems can verify that they do not have any asbestos cement pipes in the distribution system.)</p> <p>Verify that systems which exceed the MCL for IOCs (excluding nitrate and nitrite), SOCs, VOCs, and TTHMs collect one additional sample as soon as possible after the initial sample was taken, but not exceeding 2 weeks, at the same sampling point.</p> <p>Verify that the results of the initial and confirmation sample are averaged and that this average is used in compliance calculations.</p> <p>Verify that systems monitoring more often than annually determine compliance with MCLs for IOCs, SOCs, and VOCs by running an annual average at any sampling point.</p> <p>Verify that systems meet the TTHM compliance calculation requirements specified in 40 CFR 141.30, the reporting requirements in 40 CFR 141.31, and the public notification requirements of 40 CFR 141.32.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS: October 1997</b>
<p><b>COMMUNITY WATER SYSTEMS</b></p> <p><b>WQ.45.</b> <b>Notification and Reporting Requirements</b></p> <p><b>WQ.45.1.CT.</b> Community water systems must meet general notification requirements for violations not covered in WQ.30.2.CT (Conn. Agencies Regs. 19-13-B102(i)(5)).</p> <p><b>WQ.45.2.CT.</b> Community water systems must meet recordkeeping requirements (Conn. Agencies Regs. 19-13-B102(l)(1)(E) and (F)).</p> <p><b>WQ.45.3.CT.</b> Community water systems must meet specific public notification requirements (Conn. Agencies Regs. 19-13-B102(r)).</p>	<p>Verify that systems provide the following notifications at least annually:</p> <ul style="list-style-type: none"> <li>- notice to consumers that water quality information is available to the public</li> <li>- when sodium concentration for water ready for consumption exceeds 28.0 mg/L, notice to consumers by direct mail or in the next billing cycle which reads: <b>IF YOU HAVE BEEN PLACED ON A SODIUM-RESTRICTED DIET, PLEASE INFORM YOUR PHYSICIAN THAT OUR WATER CONTAINS _ MG/L OF SODIUM.</b></li> </ul> <p>Verify that accurate and up-to-date maps and records showing the location of the following are maintained for each community water system:</p> <ul style="list-style-type: none"> <li>- mains</li> <li>- valves</li> <li>- hydrants</li> <li>- service connections</li> <li>- other facilities including pumps, tanks, and treatment plants.</li> </ul> <p>Verify that records of each complaint received about water quality or adequacy are maintained and made available for inspection by the Department on request.</p> <p>Verify that all customers served are notified at least annually of an emergency telephone number which is continuously available for reporting service problems, or the names and telephone numbers of two persons who may be contacted.</p>

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<p><b>NONTRANSIENT, NONCOMMUNITY WATER SYSTEMS</b></p> <p><b>WQ.76. Standards</b></p> <p><b>WQ.76.1.CT.</b> NTNC water systems must meet IOC, SOC, VOC, and TTHM MCL requirements (Conn. Agencies Regs. 19-13-B102(e)(2) through (4)).</p>	<p>(NOTE: The MCL for silver is 0.05 mg/L. The MCL for chloride is 250 mg/L. The MCL for sodium is 28.0 mg/L. The MCL for chlorobenzene is 0.1 mg/L.)</p> <p>Verify that groundwater systems monitor quarterly for vinyl chloride when one or more of the following compounds are detected:</p> <ul style="list-style-type: none"> <li>- trichloroethylene</li> <li>- 1,2 tetrachloroethylene</li> <li>- 1,2 dichloroethane</li> <li>- 1,1,1 trichloroethane</li> <li>- cis 1,2 dichloroethylene</li> <li>- trans 1,2 dichloroethylene</li> <li>- 1,1 dichloroethylene.</li> </ul> <p>(NOTE: If the first analysis does not detect vinyl chloride, the Department may reduce the frequency of monitoring to once every 3 yr.)</p>

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<p><b>NONTRANSIENT NONCOMMUNITY WATER SYSTEMS</b></p> <p><b>WQ.77. Monitoring/Sampling</b></p> <p><b>WQ.77.1.CT.</b> NTNC water systems must meet IOC, SOC, VOC, and TTHM monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(4)(i), (7)(C), (D), and (O)).</p>	<p>Verify that systems serving fewer than 150 service connections begin monitoring in the second compliance period for the following chemicals:</p> <ul style="list-style-type: none"> <li>- benzo(a)pyrene</li> <li>- dalapon</li> <li>- di(2-ethylhexyl) adipate</li> <li>- di(2-ethylhexyl) phthalate</li> <li>- dinoseb</li> <li>- diquat</li> <li>- endothall</li> <li>- endirin</li> <li>- glyphosate</li> <li>- hexachlorobenzene</li> <li>- hexachlorocyclopentadiene</li> <li>- oxamyl (vydate)</li> <li>- picloram</li> <li>- simazine</li> <li>- 2,3,7,8-TCDD (dioxin).</li> </ul> <p>Verify that systems monitor at the time designated by the Department within each compliance period.</p> <p>(NOTE: With the exception of nitrate, nitrite, and TTHM, the Department may allow the use of monitoring data collected after 1 January 1990 to satisfy the base sampling requirement. Systems which use grandfathered samples of organic chemicals and did not detect any VOC must monitor annually beginning 1 January 1993.)</p> <p>Verify that surface water sources are tested for TTHMs quarterly.</p> <p>Verify that TTHM samples are collected in the distribution system at a location(s) approved by the Department.</p> <p>(NOTE: Systems using groundwater sources that are not under the direct influence of surface water and serve 1000 persons or fewer may collect all required samples on a single day if they are taken from different sites.)</p>

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<p><b>WQ.77.2.CT.</b> NTNC water systems which exceed MCLs must meet confirmation sampling requirements (Conn. Agencies Regs. 19-13-B102(e)(7)(P)).</p> <p><b>WQ.77.3.CT.</b> NTNC water systems must meet compliance calculation requirements for IOCs, SOC, and VOCs, (Conn. Agencies Regs. 19-13-B102(e)(7)(Q)(i)).</p>	<p>(NOTE: Consecutive water systems need not monitor for IOCs, SOC, VOCs, or TTHMs but must monitor for lead, copper, and asbestos. The Department may waive asbestos testing requirements if consecutive water systems can verify that they do not have any asbestos cement pipes in the distribution system.)</p> <p>Verify that systems which exceed the MCL for IOCs (excluding nitrate and nitrite), SOC, VOCs, and TTHMs collect one additional sample as soon as possible after the initial sample was taken, but not exceeding 2 weeks, at the same sampling point.</p> <p>Verify that the results of the initial and confirmation samples are averaged and that this average is used in compliance calculations.</p> <p>Verify that systems monitoring more often than annually determine compliance with MCLs for IOCs, SOC, and VOCs by running an annual average at any sampling point.</p>

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<p><b>STATE-SPECIFIC CATEGORIES OF WATER SYSTEMS</b></p> <p><b>WQ.85. Private/Other</b></p> <p>WQ.85.1.CT. Private water supplies must meet drinking water quality requirements (Conn. Agencies Regs. 19-13-B101(b) and (c)).</p> <p><b>Seasonal</b></p> <p><b>WQ.85.2.CT.</b> Seasonal water systems must meet IOC, SOC, VOC, and TTHM MCL requirements (Conn. Agencies Regs. 19-13-B102(e)(2) through (4)).</p> <p><b>WQ.85.3.CT.</b> Seasonal water systems must meet IOC, SOC, VOC, and TTHM</p>	<p>Verify that private water supplies meet the MCL of 0.00010 mg/L for 1,2-Dibromoethane.</p> <p>Verify that laboratory tests for private water supplies are conducted by certified laboratories.</p> <p>(NOTE: The MCL for silver is 0.05 mg/L. The MCL for chloride is 250 mg/L. The MCL for sodium is 28.0 mg/L. The MCL for chlorobenzene is 0.1 mg/L.)</p> <p>Verify that groundwater systems monitor quarterly for vinyl chloride when one or more of the following compounds are detected:</p> <ul style="list-style-type: none"> <li>- trichloroethylene</li> <li>- 1,2 tetrachloroethylene</li> <li>- 1,2 dichloroethane</li> <li>- 1,1,1 trichloroethane</li> <li>- cis 1,2 dichloroethylene</li> <li>- trans 1,2 dichloroethylene</li> <li>- 1,1 dichloroethylene.</li> </ul> <p>(NOTE: If the first analysis does not detect vinyl chloride, the Department may reduce the frequency of monitoring to once every 3 yr.)</p> <p>Verify that systems serving fewer than 150 service connections begin monitoring in the second compliance period for the following chemicals:</p>



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<p>monitoring requirements (Conn. Agencies Regs. 19-13-B102(e)(4)(i), (7)(C), (D), and (O)).</p>	<ul style="list-style-type: none"> <li>- benzo(a)pyrene</li> <li>- dalapon</li> <li>- di(2-ethylhexyl) adipate</li> <li>- di(2-ethylhexyl) phthalate</li> <li>- dinoseb</li> <li>- diquat</li> <li>- endosulfan</li> <li>- endrin</li> <li>- glyphosate</li> <li>- hexachlorobenzene</li> <li>- hexachlorocyclopentadiene</li> <li>- oxamyl (Vydate)</li> <li>- picloram</li> <li>- simazine</li> <li>- 2,3,7,8-TCDD (dioxin).</li> </ul> <p>Verify that systems monitor at the time designated by the Department within each compliance period.</p> <p>(NOTE: With the exception of nitrate, nitrite, and TTHM, the Department may allow the use of monitoring data collected after 1 January 1990 to satisfy the base sampling requirement. Systems which use grandfathered samples of organic chemicals and did not detect any VOC must monitor annually beginning 1 January 1993.)</p> <p>Verify that surface water sources are tested for TTHMs quarterly.</p> <p>Verify that TTHM samples are collected in the distribution system at a location(s) approved by the Department.</p> <p>(NOTE: Systems using groundwater sources which are not under the direct influence of surface water and serve 1000 persons or fewer may collect all required samples on a single day if they are taken from different sites.)</p> <p>(NOTE: Consecutive water systems need not monitor for IOCs, SOCs, VOCs, or TTHMs but must monitor for lead, copper, and asbestos. The Department may waive asbestos testing requirements if consecutive water systems can verify that they do not have any asbestos cement pipes in the distribution system.)</p>
<p><b>WQ.85.4.CT.</b> Seasonal water systems which exceed MCLs must meet confirmation sampling requirements (Conn. Agencies Regs. 19-13-</p>	<p>Verify that systems which exceed the MCL for IOCs (excluding nitrate and nitrite), SOCs, VOCs, and TTHMs collect one additional sample as soon as possible after the initial sample was taken, but not exceeding 2 weeks, at the same sampling point.</p> <p>Verify that the results of the initial and confirmation sample are averaged and</p>

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<p>B102(e)(7)(P)).</p> <p><b>WQ.85.5.CT.</b> Seasonal water systems must meet compliance calculation requirements for IOCs, SOCs, and VOCs (Conn. Agencies Regs. 19-13-B102(e)(7)(Q)(i)).</p>	<p>that this average is used in compliance calculations.</p> <p>Verify that systems monitoring more often than annually determine compliance with MCLs for IOCs, SOCs, and VOCs by running an annual average at any sampling point.</p>

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<p><b>WQ.90. DRINKING WATER WELLS</b></p>	<p>(NOTE: Parts of WQ.90 pertaining to well contractors apply to any person who engages in the industry, procedures, or operation of obtaining water from a well(s) by drilling or other methods. Parts of WQ.90 pertaining to well drilling contractors apply to any person regularly offering to the general public the services of his employees or himself in the industry of obtaining water from a well for any purpose or use.)</p>
<p><b>WQ.90.1.CT.</b> Drinking water wells with a required withdrawal rate of under 10 gal/min must meet specific horizontal separation distance requirements (Conn. Agencies Regs. 19-13-B51d(a)).</p>	<p>Verify that wells with a required withdrawal rate of under 10 gal/min meet the following horizontal separation distance requirements:</p> <ul style="list-style-type: none"> <li>- wells are located at a relatively high point on the premises consistent with the general layout and surroundings</li> <li>- wells are protected against surface wash</li> <li>- wells are as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit</li> <li>- wells are in a direction away from groundwater flow from any existing or probable source of pollution</li> <li>- wells are more than 75 ft away from a sewage disposal system or other source of pollution but, if a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, the minimum separation distance is 25 ft</li> <li>- wells are more than 25 ft of the high water mark of any surface water body and more than 25 ft from a drain carrying surface water or from a foundation drain.</li> </ul>
<p><b>WQ.90.2.CT.</b> Drinking water wells with a required withdrawal rate from 10 to 50 gal/min must meet specific horizontal separation distance requirements (Conn. Agencies Regs. 19-13-B51d(b)).</p>	<p>Verify that wells with a required withdrawal rate from 10 to 50 gal/min meet the following horizontal separation distance requirements:</p> <ul style="list-style-type: none"> <li>- wells are located at a relatively high point on the premises consistent with the general layout and surroundings</li> <li>- wells are protected against surface wash</li> <li>- wells are as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit</li> <li>- wells are in a direction away from groundwater flow from any existing or probable source of pollution</li> <li>- wells are more than 150 ft away from a sewage disposal system or other source of pollution but, if a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, the minimum separation distance is 75 ft</li> <li>- wells are more than 50 ft of the high water mark of any surface water body</li> </ul>

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<p><b>WQ.90.3.CT.</b> Drinking water wells with a required withdrawal rate of more than 50 gal/min must meet specific horizontal separation distance requirements (Conn. Agencies Regs. 19-13-B51d(c)).</p>	<p>and more than 50 ft from a drain carrying surface water or from a foundation drain.</p> <p>Verify that:</p> <ul style="list-style-type: none"> <li>- well location is approved by the State Department of Health</li> <li>- wells are located at a relatively high point on the premises consistent with the general layout and surroundings</li> <li>- wells are protected against surface wash</li> <li>- wells are as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit</li> <li>- wells are in a direction away from groundwater flow from any existing or probable source of pollution</li> <li>- wells are more than 200 ft away from a sewage disposal system or other source of pollution but, if a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, the minimum separation distance is 100 ft</li> <li>- wells are more than 50 ft of the high water mark of any surface water body and more than 50 ft from a drain carrying surface water or from a foundation drain.</li> </ul>
<p><b>WQ.90.4.CT.</b> Drinking water wells must meet construction requirements (Conn. Agencies Regs. 19-13-B51f, k, 25-128-35(c), 42(f) through (h), 54, and 61).</p>	<p>Verify that well development and subcontracted work is performed by properly registered persons.</p> <p>Verify that a permit is obtained by a registered well contractor prior to drilling a well.</p> <p>(NOTE: A person who constructs a well on his/her own or leased property, intended for use only for farming purposes on his/her farm, are not required to obtain a certificate of registration or a permit.)</p> <p>Verify that well drillers maintain a log clearly identifying the well location and submit copies of the log to the Board and to the well owner(s).</p> <p>Verify that wells under construction are protected so that there can be no drainage or surface wash into the well.</p> <p>Verify that workmen exercise sanitary precautions in waste disposal and handling of construction materials so as to avoid contamination of the well and aquifer.</p> <p>Verify that all water used in well construction is disinfected with 50 mg/L of</p>

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	<p>chlorine.</p> <p>Verify that polluted water is not used in connection with well construction.</p> <p>Verify that, on completion of a well, the well contractor pumps or otherwise flushes the well sufficiently to clear the water of cuttings and that he/she makes a yield test to determine the quantity and stability of water flow from the well.</p> <p>Verify that pump installers disinfect each new well system before use by treating the water in the well, storage tank, and connected piping with a chlorine solution of 50 mg/L in order to obtain a residual of 10 mg/L after 3 h detention.</p> <p>Verify that the side walls and piping are rinsed with the chlorine solution.</p> <p>Verify that all well maintenance, repair, hydrofracturing, developing, and replacement work is done only by a registered well driller or by a licensed plumber or electrician.</p>
<p><b>WQ.90.5.CT.</b>      Drinking water wells must meet man-hole requirements if the concrete cover slab cannot be readily removed (Conn. Agencies Regs. 19-13-B51g).</p>	<p>Verify that, if the concrete cover slab cannot be readily removed, a manhole is installed.</p> <p>Verify that manholes are provided with a curb extending at least 2 in. above the slab and are equipped with a watertight overlapping cover.</p> <p>Verify that manhole covers are locked or bolted in place in a manner which prevents tampering or are located in a locked housing.</p>
<p><b>WQ.90.6.CT.</b>      Drinking water wells must meet well pit requirements (Conn. Agencies Regs. 19-13-B51h and i).</p>	<p>Verify that the use of a well pit is avoided whenever practical and that when one is used it is large enough to permit ready access to equipment.</p> <p>Verify that a well pit and its juncture with any other structure is watertight or suitably drained to insure dryness.</p> <p>Verify that every conduit or similar connection with a well pit is watertight.</p> <p>Verify that any drains to the ground surface are screened to prevent entrance of animals and insects.</p> <p>Verify that well pit drains are not connected directly with any sewer, house drain, or storm drain.</p>

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<p><b>WQ.90.7.CT.</b> Drinking water wells must meet requirements for permanent appurtenances (Conn. Agencies Regs. 19-13-B51j).</p>	<p>Verify that any permanently installed equipment, piping, or appurtenance is joined watertight to the well casing at the entrance point to the well by a well top seal or equally effective means.</p> <p>Verify that wells in which the drawdown is 10 ft or more are fitted with an adequate air vent which extends at least 12 in. above any possible high water level and is shielded and screened so as to permit the entrance of air but keep out foreign matter.</p> <p>Verify that the well casing extends at least 6 in. above the floor.</p> <p>Verify that hand pumps meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are constructed so that a stuffing box or other arrangement prevents entrance of contamination around the pump rod</li> <li>- the pump spout is a covered type</li> <li>- the base is of the one-piece flange type</li> <li>- provision is made for leading waste water away from the top of the well</li> <li>- hand pumps are frostproof, do not require priming, and are mounted in a sanitary method approved by the Commissioner of Health.</li> </ul>
<p><b>WQ.90.8.CT.</b> Drinking water wells must meet testing requirements after construction and prior to use (Conn. Agencies Regs. 10-13-B51l).</p>	<p>Verify that, after disinfection and all chlorine has been dissipated, a nonpublic water supply well is sampled for bacteriological, physical, and sanitary chemical examination and that the local Director of Health approves the test results prior to use of the well water.</p> <p>Verify that public water supply wells are sampled by the State Department of Health or local Director of Health for bacteriological, physical, and sanitary chemical examination and that the Commissioner approves the test results prior to the well water being made available for use.</p>
<p><b>WQ.90.9.CT.</b> Drinking water wells must meet abandonment requirements (Conn. Agencies Regs. 25-128-56).</p>	<p>Verify that abandoned wells are not a source or cause of contamination or pollution of groundwater resources.</p> <p>Verify that abandonment procedures are performed or directed by a registered well driller.</p>

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<p><b>WQ.115. WATER QUALITY STANDARDS</b></p> <p><b>WQ.115.1.CT.</b> Water companies must meet permit requirements to change the use of watershed lands (Conn. Agencies Regs. 25-37d-1(a)).</p> <p><b>WQ.115.2.CT.</b> Surface and groundwater quality requirements must be met (Conn. Agencies Regs. 25-54i(II)(13), (15), (21), (22), (26), (33), (IV)(40), and (44)).</p>	<p>Verify that water companies have a permit from the state Commissioner of Health Services prior to selling, leasing, assigning, or otherwise disposing of or changing the use of any watershed lands and any off-watershed Class II lands.</p> <p>(NOTE: Surface requirements apply to all tidal waters, harbors, estuaries, rivers, brooks, watercourses, waterways, lakes, ponds, marshes, bogs, those portions of inland wetlands which are inundated or saturated by surface or groundwaters at a frequency and duration sufficient to support, and that under normal circumstances do support, prevalence of vegetation typically adapted for life in saturated soil conditions, and those portions of tidal wetlands below mean high water.)</p> <p>Verify that surface waters and sediments are free from chemical constituents in concentrations or combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms or impair the biological integrity of aquatic or marine ecosystems outside of any allocated zone of influence or which will or can reasonably be expected to bioconcentrate or bioaccumulate in tissues of fish, shellfish, and other aquatic organisms to levels which will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors, or health risks to human consumers of aquatic life.</p> <p>Verify that radioactive materials in concentrations or combinations which would be harmful to human, animal, or aquatic life are not discharged to the environment.</p> <p>Verify that the Alpha emitters in surface waters to which groundwaters flow do not exceed a concentration of 1000 pCi/L.</p> <p>Verify that all treated domestic sewage discharges to surface waters are disinfected.</p> <p>Verify that sewage, sink, and galley wastes from boats, whether or not treated by any marine sanitation device, are not discharged into inland freshwaters not</p>

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	<p>capable of interstate navigation and in marine waters.</p> <p>Verify that dredged materials dumped at approved disposal areas do not pollute the waters of the state and do not result in any of the following:</p> <ul style="list-style-type: none"> <li>- floating residues of any sort</li> <li>- release of any substance which may result in long-term or permanent degradation of water quality in waters overlying or adjacent to the disposal areas</li> <li>- dispersal of sediments outside a zone of influence enclosing the designated disposal points</li> <li>- biological mobilization and subsequent transport of toxic substances to food chains.</li> </ul> <p>Verify that sample containers, preservation, handling, and analysis conforms to USEPA methods specified in 40 CFR 136.</p> <p>Verify that the groundwater quality criteria in Appendix 13-2 are met.</p>



## Appendix 13-1

### General Monitoring Parameters (Source: Conn. Agencies Regs. 19-13-B102(c))

**Table 1**

Parameter	Degree of Treatment	
	Disinfection and Chemical Treatment	Filtration
Coliform organisms*	Not to exceed 100/100 mL monthly average, based on a running arithmetic average for the most recent 12-mo period. No individual sample exceeds 500/100 mL.	Not to exceed 20,000/100 mL as measured by a monthly geometric mean.
Color	Not to exceed 20 standard units in more than 10 percent of samples for the most recent 12-mo period.	Not to exceed 250 standard units measured by a monthly geometric mean.
Turbidity	The turbidity level as specified in 40 CFR 141.74(a)(4), in a representative sample of the source water immediately prior to the first or only point of disinfection application, does not exceed 5 NTU.	Not to exceed 250 NTU as measured by a monthly geometric mean.
Arsenic	0.05 mg/L	0.05 mg/L
Barium	1.0 mg/L	1.0 mg/L
Cadmium	0.01 mg/L	0.01 mg/L
Chloride	250.0 mg/L	250.0 mg/L
Chromium	0.05 mg/L	0.05 mg/L
Copper	0.05 mg/L	1.0 mg/L
Cyanide	0.01 mg/L	0.2 mg/L
Fluoride	2.0 mg/L	2.0 mg/L
Lead	0.05 mg/L	0.05 mg/L
Methylene blue active substance	0.5 mg/L	0.5 mg/L
Mercury	0.002 mg/L	0.005 mg/L
Nitrate plus nitrite as N	10.0 mg/L	10.0 mg/L
Selenium	0.01 mg/L	0.01 mg/L
Silver	0.05 mg/L	0.05 mg/L

\* If coliform organisms are demonstrated to be not associated with a fecal source on the basis of a sanitary survey and differential tests, exception may be made.

**Table 2**

Parameter	All Degrees of Treatment
Endrin	0.002 mg/L
Lindane	0.0002 mg/L
Methoxychlor	0.04 mg/L

Parameter	All Degrees of Treatment
Toxaphene	0.003 mg/L
2,4-D	0.07 mg/L
2,4,5-TP (Silvex)	0.005 mg/L

## Appendix 13-2

### Groundwater Quality Criteria (Source: Conn. Agencies Regs. 25-54i(V))

Class GAA* and Class GA** Groundwaters	
Parameter	Standard
Dissolved oxygen	As naturally occurs
Oils and grease	None other than of natural origin
Color and turbidity	None other than of natural origin
Coliform bacteria	Not to exceed a monthly arithmetic mean of 1 or, more than 4 in any individual sample collected
Taste and odor	None other than of natural origin
pH	As naturally occurs or as may result from normal agricultural, horticultural, lawn maintenance, or construction activity provided all reasonable controls are used.

\* Designated for use as existing or potential public drinking water supply.

\*\* Designated for use as existing private and potential public water supply.